

H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.

- “(3) “Records” means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.
- “(4) “Independent Certified Public Accountant” means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his/her residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant’s independence shall not be confined to the relationships existing in connection with the filing or reports with the awarding authority.
- “(5) “Audit,” when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.
- “(6) “Accountant’s Report,” when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he/she has made and sets forth his/her opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed, the reason therefor shall be stated. An accountant’s report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.
- “(7) “Management,” when used herein, means the chief executive officer, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.
- “(8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principals and auditing standards.
- “(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty B through thirty P, inclusive, of chapter seven, and pursuant to section thirty-nine M of chapter thirty or to section forty-five A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:
 - “(1) The Contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and

- “(2) Until the expiration of six years after final payment, the office of inspector general, and the deputy commissioner of capital planning and operations shall have the right to examine any books, documents, papers or records of the contractor or of his/her subcontractors that directly pertain to, and involve transactions relating to, the contractor or his/her subcontractors, and
 - “(3) If the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his/her description the date of the change and reasons therefor, and shall accompany said descriptions with a letter from the contractor’s independent certified public accountant approving or otherwise commenting on the changes, and
 - “(4) If the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and
 - “(5) If the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.
- “(c) Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and subsidiaries reasonably assures that:
- “(1) Transactions are executed in accordance with management’s general and specific authorization;
 - “(2) Transactions are recorded as necessary:
 - “i. To permit preparation of financial statements in conformity with generally accepted accounting principles, and
 - “ii. To maintain accountability for assets;
 - “(3) Access to assets is permitted only in accordance with management’s general or specific authorization; and
 - “(4) The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.
- “Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he/she has examined the statement of management on internal accounting controls, and expressing an opinion as to:

- “(1) Whether the representations of management in response to this paragraph, and paragraph (b) above are consistent with the result of management’s evaluation of the system of internal accounting controls; and
- “(2) Whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant’s financial statements.
- “(d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the deputy commissioner of capital planning and operations during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant’s report. Such statements shall be made available to the awarding authority upon request.
- “(e) The office of inspector general, the deputy commissioner for capital planning and operations and any other awarding authority shall enforce the provisions of this section. The deputy commissioner of capital planning and operations may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor’s failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine.”
- “(f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b).”

Attention is directed to the following section of Chapter 82 of the Massachusetts General Laws as amended to date:

SECTION 40: EXCAVATIONS; NOTICES; PENALTIES

Section 40. “No person shall, except in an emergency, contract for, or make an excavation, which shall include, but not be limited to, the discharge of explosives and the demolition of any structure but which shall not be deemed to include gardening or tilling the soil in the case of privately owned land, in any public way, any public utility company right of way or easement, or any privately owned land under which any public utility company, municipal utility department, natural gas pipeline company, or cable television company maintains underground facilities, including pipes, mains, wires or conduits, unless at least seventy-two hours, exclusive of Saturdays, Sundays and legal holidays, but not more than thirty days, before the proposed excavation is to be made such person has given an initial notice in writing of the proposed excavation to such natural gas pipeline companies, public utility companies, cable television companies and municipal utility departments as supply gas, electricity, telephone or cable television service in or to the city or town where such excavation is to be made. Such notice shall set forth the name of the street or the route number of said way and a reasonably accurate description of the location in said way or on private property the excavation is to be made. In addition, such initial notice shall indicate whether any such

excavation will involve blasting and, if so, the date on which the specific location at which such blasting is to occur; provided, however, that in no event shall any excavation by blasting take place unless written notice thereof, either in the initial notice or a subsequent notice, accurately specifying the date and location of such blasting shall have been given and received at least twenty-four hours in advance, except in the case of an unanticipated obstruction requiring blasting when such notice should not be less than four hours in advance to such natural gas pipeline companies, public utility companies, cable television companies and municipal utility departments as supply gas, electricity, telephone or cable television services in or to the city or town where such excavation by blasting is to be made. If any such notice cannot be given as aforesaid because of an emergency, it shall be given as soon as may be practicable. Copies of such notices together with a statement certifying that they have been mailed or delivered to such cable television companies and public utility companies as required by this section shall be filed with the officer or board having charge of any such public way before a permit to excavate or to blast may be approved or issued, except in case of an emergency.

“Where an excavation is to be made by a contractor as part of the work required by a contract with the commonwealth or with any political subdivision thereof or other public agency, for the construction, reconstruction, relocation or improvement of a public way or for the installation of a railway track, conduit, sewer or water main, such contractor shall be deemed to have complied with the requirements of this section by giving such notices as required by this section setting forth the location and the approximate time required to perform the work involved to each of said companies.

“Within seventy-two hours, exclusive of Saturdays, Sundays and legal holidays, from the time said initial notice is received or at such time as said company and the excavator agree in writing, said company shall respond to the original written notice or to subsequent oral or written notice by designating at the locus, the location of pipes, mains, wires or conduits, in that portion of the public way, public utility company right-of-way or easement or privately owned land in which the excavation is to be made; provided, however, that in the event that the excavator has given notice of proposed excavation as aforesaid at a locus at which because of its length or size the company cannot reasonably designate the location of all such pipes, mains, wires or conduits within such seventy-two hour period, then the excavator shall notify the company of the portion of the locus in which excavation is to be first made and the company shall designate the location of such pipes, mains, wires or conduits in such portion within seventy-two hours and shall designate the location of the pipes, mains, wires or conduits in the remaining portion of the locus within a reasonable time thereafter; and the providing of such designation by the company shall constitute prima facie evidence of an exercise of reasonable precaution by the company as required by this section. After a company has designated the location of such pipes, mains, wires and conduits at the locus of the excavation in accordance with the provisions of this section, the excavator shall be responsible for maintaining the designation markings at such locus, unless the said excavator requests re-marking at the locus due to the obliteration, destruction or other removal of such markings and the company shall then have twenty-four hours following the receipt of such request to re-mark such locus.

“Any such excavation shall be performed in such manner, and such reasonable precautions taken to avoid damage to the pipes, mains, wires or conduits in use under the surface of said public way, public utility company right-of-way or easement, or privately owned land, including, but not limited to, any substantial weakening of structural or lateral support of such pipe, main, wire, or conduit, penetration or destruction of any pipe, main, wire or the protective coating thereof, or the severance of any pipe, main or conduit.

“When any damage of any such pipe, main, wire or conduit or its protective coating occurs, the public utility company, natural gas pipeline company, cable television company or municipal utility

department shall be notified immediately by the person or public agency responsible for the excavation causing the damage.

“The making of an excavation without providing any or all notice or notices required by this section with respect to any proposed excavation which results in any damage to a pipe, main, wire or conduit or its protective coating shall be prima facie evidence in any legal or administrative proceeding that such damage was caused by the negligence of such person.

“Notice to the public utility underground plant damage prevention system pursuant to section seventy-six D of chapter one hundred and sixty-four, which notice is given during normal business hours each day of the year exclusive of Saturdays, Sundays and legal holidays, and which notice is given with the time periods established in this section, shall constitute compliance with the written notice requirements of this section.

“Nothing contained in this section shall be construed to affect or impair local ordinances or by-laws requiring permits to be obtained before excavation in a public way, except that, notwithstanding any contrary provision of local ordinances or by-laws, no permit to excavate in a public way shall be approved or issued by the officer or board having charge of any such way, except in any emergency, until such time as copies of such notices to public utility companies and cable television companies are filed by the applicant with said officer or board for a permit as required by this section and copies of such notices are served by said officer or board upon the appropriate water and sewer department.

“Any person, contractor or company found by the department of public utilities, after a hearing, to have violated any provision of this section shall be punished by a fine of two hundred dollars for the first offense and not less than five hundred nor more than one thousand dollars for any subsequent offense.”

Attention is directed to the following sections of Chapter 149 of the Massachusetts General Laws as amended to date:

**SECTION 34: PUBLIC CONTRACTS; STIPULATION AS TO HOURS AND DAYS OF WORK;
VOID CONTRACTS**

Section 34. “Every contract, except for the purchase of material or supplies, involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the commonwealth or any county or any town, subject to section thirty, is a party, shall contain a stipulation that no laborer, workman, mechanic, foreman or inspector working within the commonwealth, in the employ of the contractor, sub-contractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid; provided, that in contracts entered into by the department of highways for the construction or reconstruction of highways there may be inserted in said stipulation a provision that said department, or any contractor or sub-contractor for said department, may employ laborers, workmen, mechanics, foremen and inspectors for more than eight hours in any one day in such construction or reconstruction when, in the opinion of the commissioner, public necessity so requires. Every such contract not containing the aforesaid stipulation shall be null and void.”

Section 34A. "Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall, before commencing performance of such contract, provide by insurance for the payment of compensation and the furnishing of other benefits under chapter one hundred and fifty-two to all persons to be employed under the contract, and that the contractor shall continue such insurance in full force and effect during the term of the contract. No officer or agent contracting in behalf of the commonwealth or any political subdivision thereof shall award such a contract until he has been furnished with sufficient proof of compliance with the aforesaid stipulations. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the officer or agent who awarded the contract at least fifteen days prior to the intended effective date thereof, which date shall be expressed in said notice. Notice of cancellation sent by the party proposing cancellation by registered mail, postage prepaid, with a return receipt of the addressee requested, shall be a sufficient notice. An affidavit of any officer, agent or employee of the insurer or of the insured, as the case may be, duly authorized for the purpose, that he has so sent such notice addressed as aforesaid shall be prima facie evidence of the sending thereof as aforesaid. This section shall apply to the legal representative, trustee in bankruptcy, receiver, assignee, trustee and the successor in interest of any such contractor. The superior court shall have jurisdiction in equity to enforce this section.

"Whoever violates any provision of this section shall be punished by a fine of not more than one hundred dollars or by imprisonment for six months, or both; and, in addition, any contractor who violates any provision of this section shall be prohibited from contracting, directly or indirectly, with the commonwealth or any political subdivision thereof, for the construction, alteration, demolition, maintenance or repair of, or addition to, any public works or public building for a period of two years from the date of conviction of said violation."

Section 34B. "Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall pay to any reserve police officer employed by him in any city or town the prevailing rate of wage paid to regular police officers in such city or town."

Section 34C. "The provisions of sections thirty, thirty-four and thirty-five and of any other pertinent sections shall apply to the commonwealth or any city or town only to the extent that such application will not be inconsistent with the provisions of section thirty A or section thirty-three A."

SECTION 44F: PLANS AND SPECIFICATIONS; SUB-BIDS; FORM; CONTENTS

Section 44F.

"(1)(a) Every contract subject to section forty-four A shall include specifications and, if deemed necessary or convenient by the awarding authority, plans, detailing all labor and materials to be furnished thereunder. Such specifications shall have a separate section for each of the following classes of work if in the estimate of the awarding authority such class of work will exceed \$20,000: (a) roofing and flashing; (b) metal windows; (c) waterproofing, damp-proofing and caulking; (d) miscellaneous and ornamental iron; (e) lathing and plastering;

(f) acoustical tile; (g) marble; (h) tile; (i) terrazzo; (j) resilient floors; (k) glass and glazing; (l) painting; (m) plumbing; (n) heating, ventilating and air-conditioning; (o) electrical work, including direct electrical radiation for heating; (p) elevators; (q) masonry work; (r) fire protection sprinkler system as defined in section 81 of chapter 146; and (s) any other class of work for which the awarding authority deems it necessary or convenient to receive sub-bids, provided that the awarding authority may, in addition, receive a combined sub-bid on the marble, tile and terrazzo work, but in that event, the marble, tile and terrazzo work shall each be a class of work for which the sub-bidder must list the information in a clearly designated place on the bid form for that purpose. Each separate section in the specifications prescribed or provided for by this paragraph shall state the time limit for filing sub-bids with the awarding authority, shall specify by number each sheet of plans showing work to be done by the subcontractor under such section, and shall require the subcontractor to install all materials to be furnished by him under such section other than materials which in the opinion of the awarding authority it is not customary under then current trade practices for such subcontractor to install and the installation of which is expressly required by another section of the specifications. Each class of work set forth in a separate section of the specifications pursuant to this section shall be a sub-trade designated in the appropriate category of the general bid form and shall be the matter of subcontract made on the basis of sub-bids in accordance with the procedure set forth in sections forty-four F(1) – (5).

“Each separate section of the specifications required by the provisions of this section shall contain a paragraph describing by class of work and by reference to paragraph numbers in that section, each class of work, if any, requiring labor and materials which, in the opinion of the awarding authority based upon an investigation of the work involved, is customarily performed in that sub-trade under subcontract with a sub-bidder for that sub-trade, and which is estimated by the awarding authority to cost in excess of ten thousand dollars, and only each class of work so described shall be a class of work for which sub-bidder for that sub-trade must list the information required in the appropriate place designated on the bid form for that purpose.

“Every contract subject to section forty-four A shall include specifications for the installation of weather protection and shall require that the general contractor shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the commissioner of planning and operations in the executive office for administration and finance.

“[There is no paragraph (b) of subsection (1).]

- “(2) Every sub-bid submitted in connection with a contract subject to section forty-four A for a sub-trade designated in item 2 of the general bid form pursuant to section forty-four E shall be submitted on a form furnished by the awarding authority and containing the following provisions:

FORM FOR SUB-BID

To all General Bidders Except those Excluded:

- A. The undersigned proposes to furnish all labor and materials required for completing, in accordance with the hereinafter described plans, specifications and addenda, all the work

specified in Section No. _____ of the specifications and in any plans specified in such section, prepared by

_____ for _____ in
(name of architect or engineer) (project)

_____, Massachusetts, for the contract
(city or town)

sum of _____ dollars (\$_____).

For Alternate No. _____; Add \$_____ Subtract \$_____
[Repeat preceding line for each alternate]

B. This sub-bid includes addenda numbered _____

C. This sub-bid

may be used by any general bidder except:

may only be used by the following general bidders:

[To exclude general bidders, insert "X" in one box only and fill in blank following that box.
Do not answer C if no general bidders are excluded.]

D. The undersigned agrees that, if he is selected as a sub-bidder, he will, within 5 days, Saturdays, Sundays and legal holidays excluded, after presentation of a subcontract by the general bidder selected as the general contractor, execute with such general bidder a subcontract in accordance with the terms of this sub-bid, and contingent upon the execution of the general contract, and, if requested so to do in the general bid by the general bidder, who shall pay the premiums therefor, or if prequalification is required pursuant to section 44D3/4, furnish a performance and payment bond of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority, in the full sum of the subcontract price.

E. The names of all persons, firms and corporations furnishing to the undersigned labor or labor and materials for the class or classes or part thereof of work for which the provisions of the section of the specifications for this sub-trade require a listing in this paragraph, including the undersigned if customarily furnished by persons on his own payroll and in the absence of a contrary provision in the specifications, the name of each such class of work or part thereto and the bid price for such class of work or part thereof are:
[Do not give bid price for any class or part thereof furnished by undersigned.]

- F. The undersigned agrees that the above list of bids to the undersigned represents bona fide bids based on the hereinbefore described plans, specifications and addenda and that, if the undersigned is awarded the contract, they will be used for the work indicated at the amounts stated, if satisfactory to the awarding authority.
- G. The undersigned further agrees to be bound to the general contractor by the terms of the hereinbefore described plans, specifications, including all general conditions stated therein, and addenda, and to assume toward him all the obligations and responsibilities that he, by those documents, assumes toward the owner.
- H. The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the plans and specifications:—
1. Have been in business under present business name _____ years.
 2. Ever failed to complete any work awarded?
- _____
3. List one or more recent buildings with names of the general contractor and architect on which you served as a sub-contractor for work of similar character as required for the above-named building.
 4. Bank reference _____
- I. The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards of subcontracts subject to section 44F.

The undersigned further certifies under penalties of perjury that this sub-bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word “person” shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

Date _____

(Name of Sub-bidder)

By _____
(Title and Name of Person Signing Bid)

(Business Address)

(City and State)

- “(3) Every sub-bid in connection with a contract subject to section forty-four A for a sub-trade designated on the general bid form pursuant to section forty-four F(2) shall be for the complete work of the sub-trade as specified, and shall be filed with the awarding authority, in a sealed envelope, before twelve o’clock noon at least four days, Saturdays, Sundays and legal holidays excluded, before the day fixed by the awarding authority for the opening of general bids, and forthwith after the time limit for the filing thereof shall be publicly opened and read by the awarding authority, which, within two days thereafter, Saturdays, Sundays and legal holidays excluded, shall reject every sub-bid which is not accompanied by a bid deposit as prescribed in sub-section (2) of section forty-four B, or which otherwise does not conform with sections forty-four A to forty-four H, inclusive, or which is on a form not completely filled in, or which is incomplete, conditional or obscure, or which contains any addition not called for; provided, however, that the failure of the awarding authority to reject such a sub-bid within such period shall not validate such a sub-bid nor preclude the awarding authority from subsequently rejecting it. Not later than the second day, Saturdays, Sundays and legal holidays excluded, before the day fixed by the awarding authority for the opening of general bids, the awarding authority shall mail to every person on record as having taken a set of plans and specifications list of sub-bidders arranged by sub-trades and listing for each sub-trade the name, address and sub-bid price of every sub-bidder submitting a sub-bid thereon not rejected by the awarding authority and the general bidders excluded from using such sub-bid. A person shall not be named by a general bidder as a sub-bidder for a sub-trade on the general bid form unless such person is included for such sub-trade in said list. If a general bidder not excluded in said list from doing so names as a sub-bidder for a sub-trade on the general bid form a person included for such sub-trade in said list at the sub-bid price stated in said list, neither the general bid of such general bidder nor the general contract executed on the basis of such general bid shall be invalid or rejected because of the invalidity of such sub-bid, or because of error in said list, nor shall such general bid be rejected nor shall such general contract be invalid because of any invalid action taken by the awarding authority in connection with any sub-bid or sub-bids; but there shall be substitution of sub-bidders and adjustment of contract price as if paragraph (c) of section forty-four F(4) were applicable. No sub-bid shall be rejected because of the failure to submit prices for or information relating to, any item or items for which no space is provided in the sub-bid form furnished by the awarding authority; but this sentence shall not be applicable to any failure to furnish prices or information required by section forty-four F to be furnished in the Form for Sub-Bid.

“Every sub-bidder duly filing a sub-bid with the awarding authority as aforesaid shall be bound thereby to every general bidder not excluded therein from the use thereof; and any variance from such sub-bid communicated to a general bidder shall be of no effect.

“A performance and payment bond furnished by the subcontractor, either pursuant to the requirements of the prequalification process as established in section 44D3/4 or at the request of a general contractor set forth in the general bid form, shall be for the benefit of the general contractor; shall secure the performance of the subcontract by the subcontractor; and shall indemnify and hold harmless the general contractor and the surety or sureties under the labor and materials or payment bond furnished by the general

contractor to the awarding authority against (i) any and all loss and expense arising out of any and all claims in connection with the performance of the subcontract which would be required to be paid under the labor and materials or payment bond furnished by the general contractor to the awarding authority and (ii) attorneys' fees in the event that the subcontractor, after notice, fails to assume the defense of and defend such claims.

"Each sub-bidder shall list in the sub-bid form the name and bid price of each person, firm or corporation performing each class of work or part thereof for which the section of the specifications for that sub-trade requires such listing; provided that, in the absence of a contrary provision in the specifications, any sub-bidder may, without listing any bid price, list his own name for any such class of work or part thereof and perform that work with persons on his own payroll, if such sub-bidder, after sub-bid opening, shows to the satisfaction of the awarding authority that he does customarily perform such class of work or the part thereof with employees on his own payroll who are mechanics or laborers as referred to in section twenty-six, and is qualified so to do.

"If a sub-trade for which the awarding authority is required to take filed sub-bids constitutes the predominant work of the contract, the awarding authority may include that sub-trade work as part of the general bidder's work. The awarding authority shall award the general contract to the lowest responsible and eligible bidder who customarily performs that sub-trade with employees on his own payroll who are mechanics or laborers as referred to in said section twenty-six, except for any part of that sub-trade customarily performed by sub-contractors.

"[Paragraph (a) of subsection (4) applicable as provided by 2009, 30, Secs. 22 and 46.]

- "(4)(a) (1) If no sub-bid is filed for a sub-trade designated in the general bid form or if the only sub-bids which are filed are restricted to the use of one or more general bidders, the awarding authority may state, in an addendum issued with the list of sub-bidders required by subsection (3), that the general bidder shall include in the cost of his own work an amount to cover all the work required for any such sub-trade. The general contractor shall cause the work covered by such sub-trade to be done by a qualified and responsible sub-contractor, subject to the written approval of the awarding authority. If the awarding authority determines that any sub-contractor chosen by the general contractor under this section is not qualified or responsible, the general contractor shall obtain another sub-contractor who is satisfactory to the awarding authority with no adjustment in the general contractor's price.
- "(2) If a rejection of all sub-bids, other than as set forth above, for such a sub-trade occurs pursuant to subsection (1) of section forty-four E or subsection (3) of this section, the awarding authority shall state, in an addendum issued with the list of sub-bidders required by said subsection (3), the amount to be included by a general bidder on the general bid form for such sub-trade; and without in any way affecting other sub-bidders who have conformed to the prescribed bidding procedure, new sub-bids for such sub-trade shall be requested forthwith by written invitation to three or more qualified sub-bidders and shall be publicly opened and read by the awarding authority at a time and place to be specified in such invitation. The general contractor shall cause the work covered by such sub-trade to be done by the lowest responsible and eligible sub-bidder against whose standing and ability the general contractor makes no objection or, if there is no such sub-bidder, by

such sub-contractor against whose standing and ability the general contractor makes no objection and for such sum as the general contractor and the awarding authority may agree upon; and the contract price shall be adjusted by the difference between the sub-contract sum and the amount stated in the addendum. The general bidder shall include in the cost of his own work on the general bid form all expenses and profits on account of such adjustments.

- “(b) If, after the selection of the lowest responsible and eligible general bidder, it be decided to consider sub-bidders other than the ones named by such general bidder in his general bid, the awarding authority and such general bidder shall jointly consider all filed sub-bids not rejected under section forty-four F(3). Any agreement to substitute a sub-bid for the one named in the selected general bid shall result in an adjustment of the general bid price by the difference between the amount of the sub-bid originally named and the amount of the sub-bid substituted therefor. If by such substitutions the total adjusted general bid price of the general bidder first selected becomes greater than the original general bid price of the second lowest responsible and eligible general bidder, then the latter shall be selected and his sub-bidders similarly considered. If, by substitutions as hereinbefore provided, the total adjusted general bid price of the second selected general bidder becomes greater than the total adjusted general bid price of the general bidder first selected or greater than the original general bid price of the third lowest responsible and eligible general bidder, then the bidder having the lower of these two general bid prices shall be selected; provided, that if the third lowest responsible and eligible general bidder is selected, his sub-bidders shall be similarly considered. The general bidder finally selected by the aforementioned process of substitutions shall be the general bidder to whom the contract shall be awarded.
- “(c) If a selected sub-bidder fails, within 5 days, Saturdays, Sundays and legal holidays excluded, after presentation of a subcontract by the general bidder selected as the general contractor, to perform his agreement to execute a subcontract in the form hereinafter set forth with such general bidder, contingent upon the execution of the general contract, and, if required to do so pursuant to the prequalification process under section 44D3/4 or if requested to do so by such general bidder in the general bid, to furnish a performance and payment bond as stated in his sub-bid such general bidder and the awarding authority shall select, from the other sub-bids duly filed with the awarding authority for such sub-trade and not rejected under section 44H the lowest responsible and eligible sub-bidder at the amount named in his sub-bid as so filed against whose standing and ability the general contractor makes no objection, and the contract price shall be adjusted by the difference between the amount of the sub-bid and the amount of the sub-bid of the delinquent sub-bidder.

“The subcontract shall be in the following form:

SUBCONTRACT

THIS AGREEMENT MADE THIS _____ DAY OF _____ (insert year), by and between _____ a corporation organized and existing under the laws of _____ an individual doing business as _____ hereinafter called the “Contractor” and _____ a corporation organized and existing under the laws of _____ an individual doing business as _____ hereinafter called the “Subcontractor”.

WITNESSETH that the Contractor and the Subcontractor for the considerations hereafter named, agree as follows:

1. The Subcontractor agrees to furnish all labor and materials required for the completion of all work specified in Section No. _____ of the specifications for _____ (Name of Sub-Trade) and the plans referred to therein and addenda No. _____, _____, _____, and _____ for the _____

(complete title of the project and the project number taken from the title page of the specifications) all as prepared by _____
(Name of Architect or Engineer) for the sum of _____
(\$ _____) and the Contractor agrees to pay the Subcontractor said sum for said work. This price includes the following alternates (and other items set forth in the sub-bid):
Alternate No(s). _____, _____, _____, _____, _____
_____, _____, _____, _____, _____, _____, _____
_____, _____, _____,
 - (a) The Subcontractor agrees to be bound to the Contractor by the terms of the hereinbefore described plans; specifications (including all general conditions stated therein) and addenda No. _____, and _____, and _____, and to assume to the Contractor all the obligations and responsibilities that the Contractor by those documents assumes to the _____
_____ (Awarding Authority)
hereinafter called the "Awarding Authority", except to the extent that provisions contained therein are by their terms or by law applicable only to the Contractor.
 - (b) The Contractor agrees to be bound to the Subcontractor by the terms of the hereinbefore described documents and to assume to the Subcontractor all the obligations and responsibilities that the Awarding Authority by the terms of the hereinbefore described documents assumes to the Contractor, except to the extent that provisions contained therein are by their terms or by law applicable only to the Awarding Authority.
2. The Contractor agrees to begin, prosecute and complete the entire work specified by the Awarding Authority in an orderly manner so that the Subcontractor will be able to begin, prosecute and complete the work described in this subcontract; and, in consideration thereof, upon notice from the Contractor, either oral or in writing, the Subcontractor agrees to begin, prosecute and complete the work described in this Subcontract in an orderly manner and with due consideration to the date or time specified by the Awarding Authority for the completion of the entire work.
3. The Subcontractor agrees to furnish to the Contractor within a reasonable time after the execution of this subcontract, evidence of workers' compensation insurance as required by law and evidence of public liability and property damage insurance of the type and in limits required to be furnished to the Awarding Authority by the Contractor.
4. The Contractor agrees that no claim for services rendered or materials furnished by the Contractor to the Subcontractor shall be valid unless written notice thereof is given by the Contractor to the Subcontractor during the first ten (10) days of the calendar month following that in which the claim originated.
5. This agreement is contingent upon the execution of a general contract between the Contractor and the Awarding Authority for the complete work.

IN WITNESS WHEREOF, the parties hereto have executed this agreement the date and year first above-written.

SEAL

ATTEST _____

(Name of Subcontractor)

By _____

SEAL

ATTEST _____

(Name of Contractor)

By _____

“In the event that the contract between the general contractor and the awarding authority does not contain provisions granting to the awarding authority the right to terminate the general contract when the general contractor encounters financial difficulties or fails to make satisfactory progress, the general contractor may insert the following paragraph:

“If the Subcontractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Contractor, or otherwise be guilty of a substantial violation of any provision of the contract, then the Contractor may, without prejudice to any other right or remedy and after giving the Subcontractor and his surety, if any, seven days’ written notice, terminate the employment of the Subcontractor and take possession of the premises and of all materials, tools and appliances thereon and finish the work by whatever method he may deem expedient. In such case the Subcontractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work including compensation for additional architectural, managerial and administrative services, such excess shall be paid to the Subcontractor. If such expense shall exceed such unpaid balance, the Subcontractor shall pay the difference to the Contractor.

“The contractor and subcontractor shall have the right to seek damages for breach of a subcontract without terminating the subcontract or ceasing performance thereunder.

“All sub-bidders when finally selected shall be notified in writing of their selection within forty-eight hours thereafter by the general bidder.

“In each case of substitution of a sub-bidder for a sub-bidder listed in the general bid of the selected general contractor, the selected general contractor may require the substituted sub-bidder to furnish a performance and payment bond, and the premiums for same shall be

added to the general bidder's price for work to be performed by him except where the selected general contractor had indicated in his general bid that the original sub-bidder designated for that sub-trade, in which substitution was made, would be required to furnish such bond.

"In the instances enumerated in paragraphs (1), (2) and (3) of this section, the general bidder's price for work to be performed by him shall also be adjusted by the amount of the change in the premium for the general contractor's performance bond and his labor and materials or payment bond caused by the substitution.

- "(5) If a general bidder customarily performs, with employees on his own payroll who are mechanics or laborers as referred to in section twenty-six, a sub-trade for which the awarding authority invites sub-bids, he may submit a sub-bid for such sub-trade which shall be considered on a par with other sub-bids, and he shall also list under the appropriate sub-bid category in his general bid his own name and sub-bid price for such sub-trade. No such sub-bid shall be considered unless the general bidder can show (a) he does so customarily perform such sub-trade, and (b) he is qualified to do the sub-trade work.

"In lieu of listing his name and sub-bid price in his general bid, such general bidder may list the name and amount of the lowest responsible and eligible sub-bidder for that sub-trade if (a) such sub-bidder's price is lower than his, (b) such sub-bid is available for his use; and (c) such sub-bid is not restricted to his use alone or to his use and that of another general bidder, or bidders."

SECTION 44J: INVITATIONS TO BID; NOTICE; CONTENTS; VIOLATIONS; PENALTY

Section 44J. "(1) No public agency or authority of the commonwealth or any political subdivision thereof shall award any contract for which competitive bids are required pursuant to section forty-four A of this chapter or section thirty-nine M of chapter thirty, or for which competitive proposals are required pursuant to subsection (4) of section forty-four E of this chapter or section eleven C of chapter twenty-five A, unless a notice inviting bids or proposals therefor shall have been posted no less than one week prior to the time specified in such notice for the receipt of said bids or proposals in a conspicuous place in or near the offices of the awarding authority, and shall have remained posted until the time so specified, and unless such notice shall also have been published at least once not less than two weeks prior to the time so specified in the central register published by the secretary of state pursuant to section twenty A of chapter nine and in a newspaper of general circulation in the locality of the proposed project. Said notice shall also be published at such other times and in such other newspapers or trade periodicals as the commissioner of capital asset management and maintenance may require, having regard to the locality of the work involved.

- "(2) Said notice shall specify the time and place where plans and specifications of the proposed work may be had; the time and place of submission of general bids; and the time and place for opening of the general bids. For contracts subject to the provisions of sections forty-four A to H, inclusive, of this chapter, said notice shall also specify the time and place for submission of filed sub-bids, where required pursuant to section forty-four F; and the time and place for opening of said filed sub-bids.

“Said notice shall also provide sufficient facts concerning the nature and scope of such project, the type and elements of construction, and such other information as will assist applicants in deciding to bid on such contract.

- “(3) No contract or preliminary plans and specifications shall be split or divided for the purpose of evading the provisions of this section.
- “(4) General bids and filed sub-bids for any contract subject to this section shall be in writing and shall be opened in public at the time and place specified in the posted or published notice, and after being so opened shall be open to public inspection.
- “(5) The provisions of this section shall not apply to any transaction between the commonwealth and any public service corporation.
- “(6) The provisions of this section may be waived in cases of extreme emergency involving the health and safety of the people and their property, upon the written approval of said commissioner. The written approval shall contain a description of the circumstances and the reasons for the commissioner’s determination.
- “(7) Whoever violates any provision of this section shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than three years or in a jail or house of correction for not more than two and one-half years, or by both said fine and imprisonment; and in the event of final conviction, said person shall be incapable of holding any office of honor, trust or profit under the commonwealth or under any county, district of municipal agency.

“Each and every person who shall cause or conspire to cause any contract or preliminary plans and specifications to be split or divided for the purpose of evading the provisions of this section shall forfeit and pay to the commonwealth, a political subdivision thereof or other awarding authority subject to this section, the sum of not more than five thousand dollars and, in addition, such person or persons shall pay, apportioned among them, double the amount of damages which the commonwealth or political subdivision thereof or other awarding authority may have sustained by reason of the doing of such act, together with the costs of the action.

- “(8) If an awarding authority rejects all general bids or does not receive any general bids, and advertises for a second opening of general bids with the original filed sub-bids as set forth in subsection (1) of section forty-four E the notice for receipt of such general bids may be published in the central register and elsewhere as required not less than one week prior to the time specified for such second opening of general bids.
- “(9) No request for proposals or invitation for bids issued under sections 38A1/2 to 38O, inclusive, of chapter 7, section 11C of chapter 25A, section 39M of chapter 30, this section and sections 44A to 44H, inclusive, shall be advertised if the awarding authority’s cost estimate is greater than 1 year old.”

SECTION 44G: ALLOWANCES; ALTERNATES; WEATHER PROTECTION DEVICES

Section 44G. “(A) “Allowance” as used herein means a sum of money covering one or more items of labor or labor and materials which is designated in bid documents and which general

bidders are required to use in computing their bids. The use of such allowances shall be prohibited in the award of any contract subject to the provisions of section forty-four A. Whenever the designer is unable to supply specifications for any item prior to the solicitation of bids, such item shall not be included in any contract subject to the provisions of section forty-four A. The awarding authority shall solicit bids for every such item separately pursuant to the provisions of section forty-four A after specifications for that item are prepared.

- “(B) Every alternate contained in the form for general bids shall be listed in a numerical sequence in order of priority. When the awarding authority decides to consider alternates in determining the lowest eligible and responsible bidder, the awarding authority shall consider the alternates in descending numerical sequence, such that no single alternate shall be considered unless every alternate preceding it on the list has been added to or subtracted from the base bid price.
- “(C) The use of options other than alternates in bid documents or bid forms subject to section forty-four A shall be prohibited under all circumstances.
- “(D) Every contract subject to section forty-four A shall include specifications for the installation of weather protection and shall require that the contractor shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the commissioner or his designee.”

ATTACHMENT C
CHANGE ORDER FORM

Date of Issuance:
 Owner: City of Attleboro, Water Department
 Contractor:
 Engineer: Tata & Howard, Inc.
 Project: Wading River Water Treatment Plant

Effective Date:
 Owner's Contract No.: 10
 DWSRF-16764
 Contractor's Project No.:
 Engineer's Project No.: 6193
 Contract Name:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Tata & Howard, Inc.	By: _____ Town of Amherst	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency

By: _____ Date: _____
 Title: _____

ATTACHMENT D

CONSTRUCTION BID SPECIFICATIONS SPECIAL PROVISIONS FOR
DISADVANTAGED BUSINESS ENTERPRISES

APPENDIX E
CONSTRUCTION BID SPECIFICATIONS
SPECIAL PROVISIONS FOR DISADVANTAGED BUSINESS ENTERPRISES
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF MUNICIPAL SERVICES

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM BACKGROUND

In May 2008 a United States Environmental Protection Agency (EPA) rule became effective that changed the Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) Program to a Disadvantaged Business Enterprise (DBE) Program.

For firms to qualify under the old MBE/WBE program they needed to be socially disadvantaged and had to be certified by the Supplier Diversity Office (SDO). Under the new DBE rule, the firms must be both **socially** and **economically** disadvantaged, **citizens of the United States**, and certified as a DBE. Women and certain minorities are presumed to be socially disadvantaged. The economic disadvantage is measured by the owner's initial and continuing personal net worth of less than \$1,320,000.

Because the Clean Water Act requires the use of MBEs and WBEs, these firms will still be utilized in the State Revolving Fund (SRF) Loan Program, but they must also be certified as DBEs.

SDO will continue to be the certifying agency for the SRF program. SDO certifies firms under the federal Department of Transportation program, which is acceptable for use in the SRF program. An additional form has been added to the DBE package to verify that DBEs are owned or controlled by United States citizens.

BID SPECIFICATIONS

I. In this contract, the percentage of business activity to be performed by disadvantaged business enterprise(s) (DBE) shall not be less than the following percentages of the total contract price or the percentage submitted by the contractor in the Schedule of Participation, whichever is greater:

Disadvantaged MBE (D/MBE) 4.2%

Disadvantaged WBE (D/WBE) 4.5%

II. DEFINITIONS

For the purpose of these provisions, the following terms are defined as follows:

- A. Awarding Authority – Entity that awards a prime contract under a State Revolving Fund loan.
- B. Bidder - Any individual, partnership, joint venture, corporation, or firm submitting a price, directly or through an authorized representative, for the purpose of performing construction or construction related activities under a Contract.
- C. Certified DBE – A DBE certified by the United States Small Business Administration, under its 8(a) Business Development Program (13 CFR part 124, subpart A) or its Small Disadvantaged Business Program (13 CFR part 124, subpart B); The United States Department of Transportation (DOT), under its regulations for Participation by DBEs in DOT programs (49 CFR parts 23 and 26); or SDO in accordance with 40 CFR part 33; provided that the certification meets the U.S. citizenship requirement under 40 CFR §33.202 or §33.203.
- D. Compliance Unit - A subdivision of MassDEP's Affirmative Action Office designated to ensure compliance under these provisions.
- E. Contractor - Any business that contracts or subcontracts for construction, demolition, renovation, survey, or maintenance work in the various classifications customarily used in work and that is acting in this capacity under the subject contract.
- F. Construction Related Services - Those services performed at the work site ancillary to, and/or in support of, the construction work, such as hauling, trucking, equipment operation, surveying or other technical services, etc. For the purposes hereof, supply and delivery of materials (e.g. pre-cast concrete elements) to the site by a supplier who has manufactured those goods, or substantially altered them before re-sales shall be considered as "construction related services"
- G. Construction Work - The activities at the work site, or labor and use of materials in the performance of constructing, reconstructing, erecting, demolishing, altering, installing, disassembling, excavating, etc, all or part of the work required by the Contract Documents.
- H. Disadvantaged Business Enterprise (DBE) - An entity owned or controlled by a socially and economically disadvantaged individual as described by Public Law 102-389 (42 U.S.C. 4370d) or an entity owned and controlled by a socially and economically disadvantaged individual as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note); a Small Business Enterprise (SBE); a Small Business in a Rural Area (SBRA); or a Labor Surplus Area Firm (LAF), a Historically Underutilized Business (HUB) Zone Small Business Concern, or a concern under a successor program.

- I. Equipment Rental Firm - A firm that owns equipment and assumes actual and contractual responsibility for renting said equipment to perform a useful function of the work of the contract consistent with normal industry practice
- J. Good Faith Efforts – The race and/or gender neutral measures described in 40 CFR 33, subpart C.
- K. HUBZone - A historically underutilized business zone, which is an area located within one or more qualified census tracts, qualified metropolitan counties, or lands within the external boundaries of an Indian reservation.
- L. HUBZone small business concern - A small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.
- M. Joint Venture - An agreement between SDO certified DBE and a non-DBE or non-DBE controlled enterprise.
1. A pairing of companies will be considered a DBE joint venture if the SDO certified DBE which is part of the relationship has more than 51% of the profits that are derived from that project.
 2. A joint venture between a certified DBE subcontractor and a non DBE subcontractor, in which the DBE for that proportion of the joint venture's contract equal to the DBE participation in the joint venture.
 3. Whenever a general bid is filed by a joint venture with a certified DBE participant in the joint venture that does not exercise more than 51% control over management and profits, that joint venture shall be entitled to credit as a DBE for that portion of the joint venture's contract equal to the DBE participation in the joint venture. Minority As deemed by SDO.
- N. Labor surplus area firm (LSAF) - A concern that together with its first-tier subcontractors will perform substantially in labor surplus areas (as identified by the Department of Labor in accordance with 20 CFR part 654). Performance is substantially in labor surplus areas if the costs incurred under the contract on account of manufacturing, production or performance of appropriate services in labor surplus areas exceed 50 percent of the contract price.
- O. Letter of Intent – Certified document signed by the principal(s) of the DBE with respect to the work to be performed under contract.
- P. Local Government Unit (LGU) – A city, town, or municipal district which applies for a loan under the Clean Water Trust Program.
- Q. Material Supplier – A vendor certified by SDO as a DBE in sales to supply industry from an established place of business or source of supply, and that vendor.

1. Manufactures goods from raw materials, or substantially utilizes them in the work, or substantially alters them before resale, entitling the general contractor to DBE credit for 100% of the purchase order.
 2. Provides and maintains a storage facility for materials utilized in the work, entitling the general contractor to DBE credit for 10% of the purchase order
- R. Minority and Women Business Enterprise (M/WBE) – Any business concern certified by the SDO as a bona-fide M/WBE. A bona-fide M/WBE is a business whose minority group/women ownership interests are real, which have at least 51% ownership and control over management and operation.
- S. Percent of Total Price – Is the percentage to be paid to the DBE, work they perform, as compared to the total bid price
- T. Recipient - An agency, person or political subdivision which has been awarded or received financial assistance by the Trust or MassDEP.
- U. Small business, small business concern or small business enterprise (SBE) - A concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR part 121.
- V. Small business in a rural area (SBRA) - A small business operating in an area identified as a rural county with a code 6-9 in the Rural-Urban continuum Classification Code developed by the United States Department of Agriculture in 1980.
- W. SDO – The Supplier Diversity Office.
- X. Subcontractor – A company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.
- Y. Total Contract Price – The total amount of compensation to be paid for all materials, work or services rendered in the performance of the contract
- Z. Trust – The Massachusetts Clean Water Trust established by M.G.L. c.29.

III. REQUIREMENTS FOR CONTRACT AWARD

DBE packages must be submitted by the two lowest bidders on the project. Following bid opening, the LGU shall notify the two lowest bidders to submit DBE packages to the LGU or the LGUs consultant, as directed. By the close of business on the third business day after notification, the two lowest bidders, including a bidder who is a MBE, WBE or DBE, shall submit the following information:

- A. A Schedule of Participation (Form EEO-DEP-190). The Schedule of Participation shall list those certified DBEs the bidder intends to use in fulfilling the contract obligations, the nature of the work to be performed by each certified DBE subcontractor and the total price they are to be paid.
 - 1. A listing of bona-fide services such as a professional, technical, consultant or managerial services, assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract, and reasonable fees or commissions charged.
 - 2. A listing of haulers, truckers, or delivery services, not the contractors, including reasonable fees for delivery of said materials or supplies to be included on the project.
- B. A Letter of Intent (Form EEO-DEP-191) for each DBE the bidder intends to use on the project. The Letter of Intent shall include, among other things, a reasonable description of the work the certified DBE is proposing to perform and the prices the certified DBE proposes to charge for the work. A Letter of Intent shall be jointly signed by the certified DBE and the General Contractor who proposes to use them in the performance of the Contract.
- C. Each DBE must also sign and return the DBE Certification of United States Citizenship form to verify that the firm is owned or controlled by a United States citizen.
- D. The SDO "DBE Certification" as prepared by each certified DBE.
- E. A completed Request for Waiver form and backup documentation should the goals not be achieved (See IV below).

IV. REQUIREMENTS FOR MODIFICATION OR WAIVERS.

The bidder shall make every possible effort to meet the minimum requirements of certified DBE participation. If the percentage of DBE participation submitted by the bidder on its Schedule of Participation (EEO-DEP-190) does not meet the minimum requirements, the bid may be rejected by the Awarding Authority and found not to be eligible for award of the contract.

In the event that the bidder is unable to meet the minimum requirements of DBE participation, the bidder shall submit with his/her submittal required in Section III. Requirement of Contract Award a Request for Waiver form (EEO-DEP-490). The Awarding Authority shall review the waiver request to determine if the request should proceed. If approved by the Awarding Authority, the Awarding Authority shall submit the waiver request and supporting documentation, with a recommendation to MassDEP within five days of receipt of the Request for Waiver. MassDEP in conjunction with the project manager, Compliance Unit, will determine whether the waiver will be granted.

The waiver request shall include detailed information as specified below to establish that the bidder has made a good faith effort to comply with the minimum requirements of DBE participation specified in Part I. In addition, the bidder must show that such efforts were undertaken well in advance of the time set for opening of bids to allow adequate response. A waiver request shall include the following:

- A. A detailed record of the effort made to contact and negotiate with the certified DBE, including, but not limited to:
 - 1. names, addresses and telephone numbers of all such companies contacted;
 - 2. copies of written notices(s) which were sent to certified DBE potential subcontractors, prior to bid opening;
 - 3. a detailed statement as to why each subcontractor contacted (i) was not willing to do the job or (ii) was not qualified to perform the work as solicited; and
 - 4. in the case(s) where a negotiated price could not be reached the bidder should detail what efforts were made to reach an agreement on a competitive price;
 - 5. copies of advertisements, dated not less than ten (10) days prior to bid opening, as appearing in general publications, trade-oriented publications, and applicable minority/ women-focused media detailing the opportunities for participation.
- B. MassDEP may require the bidder to produce such additional information as it deems appropriate.
- C. No later than fifteen (15) days after MassDEP receives all required information and documentation, it shall make a decision in writing, whether the waiver is granted and shall provide that determination to the bidder and Awarding Authority. If the waiver request is denied, the facts upon which a denial is based will be set forth in writing. If the waiver request is denied, the bid shall be rejected by the Awarding Authority, or the contract will be determined ineligible for SRF funding.

If a Request for Waiver is denied by MassDEP and the bid is rejected by the Awarding Authority, the Awarding Authority may then move to the second bidder on the project. At the Awarding Authority's discretion, it may collect a DBE package from the third bidder on the project.

V. DISADVANTAGED BUSINESS ENTERPRISES PARTICIPATION

A. Reporting Requirements

1. The Contractor's utilization of certified DBEs will be documented based upon submittal of the LGU's monthly Payment Requisitions as reported on Form-2000. The Form-2000 form will show all certified DBEs performing work on the project regardless of any billing activity for that month. For auditing and accounting purposes, the Contractor periodically may be required to submit copies of canceled checks verifying that payments have been made to the certified DBE as listed on the schedule. The Contractor may also be required to submit current schedules on utilization of all DBEs to indicate when their services will commence and be billed for.
2. During the life of the Contract, the Contractor's fulfillment of the percentage requirements in Part I shall be determined with reference to the Contract price as follows:
 - A. If the price in the Contract executed exceeds the base bid price (e.g., because an alternate was selected or because unit prices were used in awarding the Contract), the Contractor shall submit for approval by MassDEP a revised Schedule of Participation by certified DBEs satisfying the percentage requirements and such other information concerning additional DBE participation as may be requested by MassDEP.
 - B. If the Contract price increases after execution due to change orders or other adjustments, MassDEP may require the Contractor to subcontract additional work or to purchase additional goods and services from certified DBEs up to the percentages stated in Part I.

VI. COMPLIANCE

- A. If the Schedule or any of the Letters of Intent are materially incomplete or not submitted in a timely manner, the LGU may rescind its vote of award; treat the bid informal as to substance and reject the bid. If the bid is incomplete in any other respect than the Schedule the LGU with the approval of MassDEP may waive the informalities upon satisfactory completion of the required information by the Contractor and the certified DBE as applicable.
- B. If the LGU finds that the percentage of certified DBE participation submitted by the contractor on its Schedule does not meet the percentage requirement in Part I, it shall rescind its vote of award and find such contractor not to be eligible for award of the contract.

- C. The Contractor shall not perform with its own organization, or subcontract to any other primary or subcontractor any work designated for the named certified DBEs on the schedule submitted by the Contractor under Part III without the approval of MassDEP.
- D. A Contractor's compliance with the percentage requirement in Part I shall continue to be determined by reference to the required percentage of the total contract price as stated in Section I even though the total of actual contract payments may be greater or less than the bid price.
- E. If the Contractor for reasons beyond its control cannot comply with Part III in accordance with the Schedule submitted under Part III, Section B, the contractor must submit to MassDEP as soon as they are aware of the deficiency, the reason for its inability to comply. Proposed revisions to the Schedule stating how the contractor intends to meet its obligations under these conditions must be submitted within ten (10) working days of notification.
- F. If the Contractor becomes aware by any means that that DBE is no longer certified, the Contractor shall immediately notify MassDEP. The Contractor shall use good faith efforts to retain a substitute certified DBE.
- G. If a certified DBE listed by the bidder in its Schedule of M/WBE contractors fails to obtain a performance or payment bond requested by the bidder, said failure shall not entitle the bidder to avoid the requirements of Part III (A). After a bidder has been awarded the contract, he shall not change the certified DBE listed in its Schedule at the time of the award or make any other such substitutions without the written approval of MassDEP.

VII. SANCTIONS

- A. If the Contractor does not comply with the terms of these Special Provisions, the Awarding Authority may (1) suspend any payment for the work that should have been performed by a certified DBE pursuant to the schedule, or (2) require specific performance of the Contractor's obligation by requiring the Contractor to subcontract with a DBE for any contract or specialty item at the contract price established for that item in the proposal submitted by the Contractor.
- B. To the extent that the Contractor has not complied with the terms of these Special Provisions, the Awarding Authority may retain in connection with Estimates and Payments an amount determined by multiplying the bid price of this contract by the percentage in Section I, less the amount paid to DBE's for work performed under the contract and any payments already suspended under VII A.
- C. The Awarding Authority may suspend, terminate or cancel this contract, in whole or in part, or may call upon the Contractor's surety to perform all terms and conditions in the contract, unless the contractor is able to demonstrate his compliance with the terms

of these Special Provisions, and further deny to the Contractor, the right to participate in any future contracts awarded by the Awarding Authority for a period of up to three years.

- D. In any proceeding involving the imposition of sanctions by the Awarding Authority, no sanctions shall be imposed if the Awarding Authority finds that the contractor has taken every possible measure to comply with these Special Provisions or that some other justifiable reason exists for waiving these Special Provisions in whole or in part.
- E. The contract shall provide such information as is necessary in the judgment of the Awarding Authority to ascertain its compliance with the terms of these Special Provisions.
- F. A contractor shall have the right to request suspension of any sanctions imposed under this section upon demonstrating that he is in compliance with these Special Provisions.

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF MUNICIPAL SERVICES

SCHEDULE OF PARTICIPATION FOR SRF CONSTRUCTION

Project Title: _____ **Project Location:** _____

Disadvantaged Minority Business Enterprise Participation in the SRF Loan Work

Name & Address of D/MBE	Nature of Participation	Dollar Value of Participation
1.		
2.		
3.		

Total D/MBE Commitment: \$

Percentage D/MBE Participation = (Total D/MBE Commitment) / (Bid Price) =

%

Disadvantaged Women Business Enterprise Participation in the SRF Loan Work

Name & Address of D/WBE	Nature of Participation	Dollar Value of Participation
1.		
2.		
3.		

Total D/WBE Commitment: \$

Percentage D/WBE Participation = (Total D/WBE Commitment) / (Bid Price) =

%

The Bidder agrees to furnish implementation reports as required by MassDEP to indicate the D/MBEs and D/WBE(s) which it has used or intends to use. Breach of this commitment constitutes a breach of the contract.

Name of Bidder: _____

Date: _____ **By:** _____

Signature

NOTE: Participation of a DBE may be counted in only their certified category; the same dollar participation cannot be used in computing the percentage of D/MBE participation and again of D/WBE participation.

LETTER OF INTENT FOR SRF CONSTRUCTION

This form is to be completed by the D/MBE and D/WBE and must be submitted by the Bidder no later than close of business on the third business day after notification by the LGU. A separate form must be completed for each D/MBE and D/WBE involved in the project.

Project Title: _____ Project Location: _____

TO: _____
(Name of Bidder)

FROM: _____
(Please Indicate Status ☐ D/MBE or ☐ D/WBE)

° I/we intend to perform work in connection with the above project as (check one):

☐ An individual ☐ A partnership
☐ A corporation ☐ A joint venture with: _____
☐ Other (explain): _____

° It is understood that if you are awarded the contract, you intend to enter into an agreement to perform the activity described below for the prices indicated.

DBE PARTICIPATION

Description of Activity	Date of Project Commencement	\$ Amount	% Bid Price
		\$	%

° The undersigned certify that they will enter into a formal agreement upon execution of the contract for the above referenced project.

BIDDER		DBE	
(Authorized Original Signature)	Date	(Authorized Original Signature)	Date
ADDRESS:		ADDRESS:	
TELEPHONE #:		TELEPHONE #:	
FEIN:		FEIN:	
EMAIL ADDRESS:		EMAIL ADDRESS:	

ORIGINALS:

- ° Compliance Mgr. City/Town Project Location
- ° DEP Program Manager for DEP's AAO Director

*** Attach a copy of current (within 2 years) DBE Certification**

EEO-DEP-191C

EEO-DEP-E Page 11 of 16

DBE CERTIFICATION OF UNITED STATES CITIZENSHIP

For the SRF program, under the EPA Disadvantage Business Enterprise (DBE) Rule, a DBE must be owned or controlled by a socially and economically disadvantaged person that is also a **citizen of the United States** (See 40 CFR 33.202). “Ownership” is defined at 13 CFR 124.105 and “control” is defined at 13 CFR 124.106.

DBEs are certified for the SRF program through the Supplier Diversity Office using the federal Department of Transportation (DOT) DBE rules. EPA allows the use of DBEs certified under the DOT rules as long as they are also United States citizens. To ensure compliance with the EPA rule, MassDEP must verify United States citizenship through the completion of the following form for each DBE used on the project.

SRF Project Number _____

Contract Number _____

Contract Title _____

DBE Subcontractor _____

The undersigned, on behalf of the above named DBE subcontractor, hereby certifies that the DBE firm is either owned or controlled by a person or persons that are citizens of the United States.

Printed Name and Title of DBE Signatory

DBE Signature

Date

DISADVANTAGED BUSINESS ENTERPRISE
PROGRAM DBE SUBCONTRACTOR PARTICIPATION
FORM

The United States Environmental Protection Agency (EPA) requires that this form be provided to all subcontractors on the project. At the option of the subcontractor, this form may be filled out and submitted directly to the EPA DBE Coordinator.

NAME OF SUBCONTRACTOR	PROJECT NAME
ADDRESS	CONTRACT NO.
TELEPHONE NO.	E-MAIL ADDRESS
PRIME CONTRACTOR NAME:	

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR	AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR
<hr/> Subcontractor Signature <hr/>Title/Date		

REQUEST FOR WAIVER FOR SRF CONSTRUCTION

Upon exhausting all known sources and making every possible effort to meet the minimum requirements for DBE participation, the Bidder may seek relief either partially or entirely from these requirements by submitting a completed waiver package by the close of business on the third business day after notification by the LGU. Failure to comply with this process shall be cause to reject the bid thereby rendering the Bidder not eligible for award of the contract.

General Information

Project Title: _____ Project Location: _____
Bid Opening (time/date) _____
Bidder: _____
Mailing Address: _____
Contact Person: _____ Telephone No. _____

Minimum Requirements

The bidder must demonstrate that good faith efforts were undertaken to comply with the percentage goals as specified. The firm seeking relief must show that such efforts were taken appropriately in advance of the time set for opening bid proposals to allow adequate time for response(s) by submitting the following:

- A. A detailed record of the effort made to contact and negotiate with disadvantaged minority and/or woman owned businesses, including:
1. names, addresses, telephone numbers and contact dates of all such companies contacted;
 2. copies of written notice(s) which were sent to DBE potential subcontractors prior to bid opening;
 3. a detailed statement as to why each subcontractor contacted (i) was not willing to do the job or (ii) was not qualified to perform the work as solicited; and
 4. in the case(s) where a negotiated price could not be reached the bidder should detail what efforts were made to reach an agreement on a competitive price.
 5. copies of advertisements, dated not less than ten (10) days prior to bid opening, as appearing in general publications, trade-oriented publications, and applicable minority/women-focused media detailing the opportunities for participation;

- B. MassDEP may require the bidder to produce such additional information as it deems appropriate.
- C. No later than fifteen (15) days after submission of all required information and documentation, MassDEP shall make a determination, in writing, whether the waiver request is granted and shall provide that determination to the bidder and Awarding Authority. If the waiver request is denied, the facts upon which a denial is based will be set forth in writing.

CERTIFICATION

The undersigned herewith certifies that the above information and appropriate attachments are true and accurate to the best of my knowledge and that I have been authorized to act on behalf of the bidder in this matter.

(authorized original signature)

DATE

STATE REVOLVING FUND LOAN PROGRAM – SCHEDULE OF SUBCONTRACTOR PARTICIPATION

Contract Value

This form must be completed and returned to MassDEP within 90 days of award of the contract.

[illegible]

ATTACHMENT E

DIESEL RETROFIT PROGRAM

APPENDIX B DIESEL RETROFIT PROGRAM

The Department of Environmental Protection (“DEP”) has developed the Diesel Retrofit Program in response to increasing public health concerns with the emissions from diesel engines and vehicles.

Diesel Construction Equipment Standard

All diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract (hereinafter “Diesel Construction Equipment”) must have the following pollution control device installed unless exempt as provided below:

1. Emission control technology verified by U.S. Environmental Protection Agency (“EPA”) or the California Air Resources Board (“CARB”) for use with non-road engines;
2. Emission control technology verified by EPA or CARB for use with on-road engines provided that such equipment is operated with diesel fuel that has no more than 15 parts per million sulfur content (i.e. Ultra Low Sulfur Diesel fuel); or
3. Emission control technology certified by the manufacturer that such technology meets or exceeds the emission reductions provided by on-road or off-road emission control technology verified by EPA or CARB, i.e. that a Diesel Oxidation Catalyst is achieving the following minimum emission reductions: particulate matter 20%; carbon monoxide 40%; volatile organic compounds 50%; or a Diesel Particulate Filter is achieving a minimum of 85% emission reductions for particulate matter.

Emission control devices, such as oxidation catalysts or particulate filters, shall be installed on the exhaust system side of the Diesel Construction Equipment. The Contractor shall be responsible to insure that the emissions control technology is operated, maintained, and serviced as recommended by the manufacturer.

For the latest up-to-date list of EPA verified-technologies, see:

<https://www.epa.gov/verified-diesel-tech>

For the latest up-to-date list of CARB verified technologies, see:

<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

Exemptions

The following Diesel Construction Equipment shall be exempt from the standard above. The Contractor shall include such Diesel Construction Equipment in the required recordkeeping:

1. Diesel Construction Equipment not owned by the Contractor and used in the performance of the work under this Contract for 30 calendar days (cumulative days but not necessarily consecutive) or less;
2. Unless otherwise exempt, additional Diesel Construction Equipment originally not anticipated to be used under the Contract or used as permanent replacement after the work under the Contract has commenced, for 15 calendar days from the date such Diesel Construction Equipment is brought on site;

APPENDIX B (cont.)
DIESEL RETROFIT PROGRAM

3. Diesel Construction Equipment with an engine that meets the EPA particulate matter (PM) Tier emission standards in effect at the start of the Contract for non-road diesel engines for the applicable engine power group (e.g., as of January 1, 2009, a piece of Diesel Construction Equipment with a Tier 3 engine is exempt from meeting the standard until the piece of Diesel Construction Equipment is available with a Tier 4 engine) provided that if such emissions standards are superseded during the Contract then such Diesel Construction Equipment must be retrofitted in accordance with the standards above prior to the end of the Contract;
4. A large crane (e.g. a sky crane or link belt crane which is responsible for critical lift operations) if such device would adversely affect the operation of the crane provided the Contractor submits to the municipality's project engineer written technical justification documenting the adverse impact on operation; and
5. Diesel Construction Equipment that the project engineer has determined is necessary to control a compelling emergency including but not limited to, the need for rescue vehicles or other equipment to prevent harm to human beings or additional equipment required to address a catastrophic emergency such as structure collapse or imminent collapse. After the compelling emergency is controlled, such non-compliant equipment must be removed from the Contract site and may not be used in further performance of the work under this Contract. Meeting Contract deadlines is not a compelling emergency.

Contractor Certification

Each bidder shall submit as part of its bid, the Statement of Intent to Comply. Within 10 days of being notified that it has been awarded a contract, the bidder and each of its Contractors and Subcontractors shall submit a Diesel Retrofit Program Contractor Certification. Each such Certification shall contain the following information for each piece of Diesel Construction Equipment:

1. Contractor or Subcontractor name;
2. Equipment type, make, model;
3. Vehicle Identification Number or VIN;
4. Engine model and year of manufacture;
5. Engine HP rating;
6. Emission Control Device (ECD) type (Diesel Oxidation Catalyst or Diesel Particulate Filter);
7. ECD make, model, and manufacturer;
8. ECD EPA or CARB Verification Number or manufacturer's certification that the DOC or DPF meets or exceeds emission reductions provided by similar emission control technology verified by EPA or CARB;
9. ECD installation date;
10. Type of fuel to be used; and
11. Whether the equipment is owned or rented.

Recordkeeping

Each Contractor and Subcontractor shall maintain detailed records of all Diesel Construction Equipment used under the Contract, including the dates and duration times the Diesel Construction Equipment is

**APPENDIX B (cont.)
DIESEL RETROFIT PROGRAM**

used at the Contract site. Records shall be available for inspection by DEP. Each Contractor and Subcontractor shall notify DEP within 48 hours of any new Diesel Construction Equipment brought onto the Contract site.

For Diesel Construction Equipment that has an emissions control device with a manufacturer's certification, the Contractor shall maintain records of all supporting emissions test data and test procedures. If upon review the emissions reductions are not supported by the test data and test procedures, then the emissions control device may need to be replaced with a compliant retrofit device.

Project Regulatory Agreement

The following language shall be included section 4 (Covenants of the Borrower) of the municipality's Project Regulatory Agreement if it receives funds from the State Revolving Fund:

The Borrower shall require each Contractor and Subcontractor to submit the Diesel Retrofit Program Contractor Certification to DEP and the Borrower prior to commencing work on the Project. The Borrower shall not allow any Contractor or Subcontractor to commence work at the Project site prior to submitting such Certification.

**APPENDIX B (cont.)
DIESEL RETROFIT PROGRAM**

STATEMENT OF INTENT TO COMPLY

This form must be signed and submitted by the bidder as part of the bid.

Local Governmental Unit _____ **SRF Project No.** _____

Contract No. _____ **Contact Title** _____

Bidder _____

The undersigned, on behalf of the above-named Bidder, agrees that, if awarded the Contract:

- 1. the Bidder shall comply with the Massachusetts Department of Environmental Protection's ("MassDEP") Diesel Retrofit Program by ensuring that all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract are equipped or retrofitted with a pollution control device in accordance with the Diesel Retrofit Program Standard;**
- 2. the Bidder shall require all Subcontractors to comply with MassDEP's Diesel Retrofit Program by ensuring all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract are equipped or retrofitted with a pollution control device in accordance with the Diesel Retrofit Program Standard; and**
- 3. The Bidder shall submit and shall require each Subcontractor to submit a Diesel Retrofit Program Contractor Certification (form attached) with a Diesel Retrofit List to MassDEP Municipal Services and the Bidder within 10 days of the bidder being notified that it has been awarded the Contract. The Bidder shall require each Subcontractor to update such Certification and List within 2 days of using additional Diesel Construction Equipment on the project under the Contract.**

(Signature of Bidder's Authorized Representative)

(Date)

APPENDIX B (cont.)
DIESEL RETROFIT PROGRAM CONTRACTOR CERTIFICATION

Each Contractor and its Subcontractor(s) must sign and email this form to the DEP DMS project engineer, within 10 days after the contractor is awarded.

Local Governmental Unit _____ **SRF Project No.** _____

Contract No. _____ **Contact Title** _____

Contractor _____

I, _____, an authorized signatory for _____, whose principal place of business is at _____ do hereby certify that any and all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract (hereinafter "Diesel Construction Equipment") have pollution control devices, such as oxidation catalysts or particulate filters, installed on the exhaust system side of the diesel combustion engine equipment in accordance with the Diesel Retrofit Program Standard.

I am submitting on behalf of _____ a list of all said Diesel Construction Equipment, labeled "Diesel Retrofit List," that will be used in connection with this Contract by _____. I hereby certify that the information on the attached Diesel Retrofit List is correct and accurate as of the date of signature. The List includes the following information for each piece of Diesel Construction Equipment:

1. Equipment type, make, model;
2. Vehicle Identification Number or VIN;
3. Engine model and year of manufacture;
4. Engine HP rating;
5. Emission Control Device ("ECD") type (Diesel Oxidation Catalyst or Diesel Particulate Filter);
6. ECD make, model, and manufacturer;
7. ECD EPA or CARB Verification Number or manufacturer's certification that the DOC or DPF meets or exceeds emission reductions provided by similar emission control technology verified by EPA or CARB;
8. ECD installation date;
9. Type of fuel to be used; and
10. Whether the equipment is owned or rented.

APPENDIX B (cont.)

DIESEL RETROFIT PROGRAM CONTRACTOR CERTIFICATION

_____ shall notify DEP within 48 hours of any new Diesel Construction Equipment brought onto the Contract site. _____ shall maintain detailed records of all Diesel Construction Equipment used at the Contract site, including the dates and duration times the Diesel Construction Equipment is used at the Contract site. _____ shall make such records available for inspection by DEP. _____ shall ensure that the emissions control technology for each piece of Diesel Construction Equipment is operated, maintained, and serviced as recommended by the manufacturer. _____ shall retrofit prior to the end of the Contract any Diesel Construction Equipment no longer exempt from meeting the Diesel Construction Equipment Standard under exemption 3 (because it had an engine that met the EPA particulate matter (PM) Tier emission standards currently in effect at the start of the Contract for non-road diesel engines for the applicable engine power group and such emissions standards were superseded during the Contract).

I acknowledge that this certificate is being furnished as a requirement under this Contract and is subject to applicable State and federal laws, both criminal and civil. Signed under pains and penalty of perjury on this date _____.

Signature _____

Name: _____

Title: _____

ATTACHMENT F

DIVISION OF MUNICIPAL SERVICES POLICIES

APPENDIX F

DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER RESOURCES DIVISION OF MUNICIPAL SERVICES POLICIES

The Division of Municipal Services (DMS) has established the following policies for all Division financially-assisted projects.

POLICY MEMORANDUM NO. PM-1

EASEMENTS AND RIGHTS OF WAY

Prior to the approval of financial assistance for construction, the owner shall obtain and shall thereafter retain, a fee simple or such estate or interest in the site of construction and rights of access as will assure undisturbed use and possession for the purpose of construction and operation for the estimated life of the project. The Division may refuse to approve financial assistance until it has received from the owner sufficient assurances that such interests have been obtained. Unless the Division otherwise notifies the owner, the certificate (under pains and penalties of perjury) of the owner's legal representative shall constitute such sufficient assurance.

Additional cost which result from interruptions of construction or extensions of contract time caused by the owner's failure to obtain the necessary interests in land shall be ineligible for financial assistance, and all such additional costs shall be borne by the owner.

POLICY MEMORANDUM NO. PM-2

PERMITS

The owner shall be responsible for identifying and obtaining all federal, state, local and railroad permits required by the nature and location of construction, including but not limited to building construction permits and permits for street and highway cuts and openings, and all such permits shall be listed in a separate permits section of the contract documents. To the extent possible, such permits shall be obtained by the owner prior to the solicitation of bids for construction, and copies of all permits so obtained shall be included in the said permits section. The status of the application for each permit, including the permit conditions, and costs, not obtained prior to the solicitation of bids shall also be indicated in the contract documents permits section. The Division may refuse to approve financial assistance for construction unless and until it has received from the owner sufficient assurances that all necessary permits have been or will be obtained prior to the commencement of construction.

Policy Memorandum No. PM-2 – Permits (Con't)

The contractor shall be responsible for obtaining all permits required of his equipment, work force, or particular operations (such as blasting) in the performance of the contract and not otherwise specified in the two preceding paragraphs as to be obtained by the owner. These permit fees shall be paid by the contractor.

The owner shall be responsible for the payment of all other permit fees required by the construction.

The following permits shall not be eligible for financial participation by the Department of Environmental Protection (DEP).

- Permits and insurance for construction in railroads' rights of way;
- Building permits;
- Permits for opening public streets and other public or municipal rights of way;
- Permits for the use of explosives;
- Permits for the disposal of waste materials;
- Permits and fees for connecting to municipal utilities.

Permits required by extraordinary circumstances and not specifically excluded from eligibility above may be eligible for DEP participation. For such permits to be so eligible, the owner or his representative must notify the DEP project engineer in advance of obtaining such permit and receive from the engineer specific agreement that such permit will be eligible for DEP participation. Eligibility for such participation will not be made retroactively.

Additional costs which result from interruptions of construction or extensions of contract time resulting from the owner's or the contractor's failure to obtain the necessary permits may be ineligible for participation.

POLICY MEMORANDUM NO. PM-3

FIELD CONTROLS

The Owner shall be responsible for indicating on the contract drawings all easement limits and all property and other control lines for locating the principal component parts of the work together with those elevations and bench marks used in the design of the work, all hereinafter referred to as "field controls". Where easement and property limits have not previously been established in the field, the owner shall be responsible for establishment of such limits. From the information provided by the Owner, unless otherwise specified, the Contractor shall develop and make all layouts required for construction, such as slope stakes, batter boards, stakes for pipe locations and other working points, lines, elevations and cut sheets.

Whenever he has reason to believe that an error exists or whenever he is otherwise unable to locate the field controls, the contractor shall promptly notify the owner and the owner's engineer of such error with appropriate documentation.

POLICY MEMORANDUM NO. PM-4**RECORD DRAWINGS**

The Owner shall be responsible for the preparation of all record drawings required by this contract. This responsibility may be delegated to the Owner's representative. The responsibility for preparation of record drawings shall not be delegated or transferred to the contractor. They may use the contractor's and sub-contractor's certified AS BUILT drawings along with their own marked up set in the preparation of the Record Drawings.

Division approved contract drawings shall be revised upon completion of the contract to reflect any changes made and/or final quantities, as appropriate.

POLICY MEMORANDUM NO. PM-5**PLAN SCALE**

Unless otherwise approved in advance by the Division, the horizontal scale for construction plans for non-structural facilities shall be 1" = 40'. A larger horizontal scale shall be used where appropriate to show sufficient detail to construct the project. The vertical scale for construction plans for non-structural facilities shall be 1" = 4'. Based on the best information available at the time of their preparation, the location of underground utilities and support structures for overhead utilities shall be shown on the plans.

Unless otherwise exempted in advance by the Division, construction plans shall be updated whenever the date of the advertisement for bids for the construction of such facilities is more than one year after the date of approval by the Division or EPA; and in the case of approval by both such agencies, the later approval date shall be used in determining the need for update.

The consulting engineer shall receive adequate compensation for updating plans and specifications, and such additional cost shall be eligible for assistance to the extent not otherwise prohibited by USEPA and Division regulations and program guidance.

All revision, or review without need for revision, shall be noted and dated on the plans prior to advertisement of the project for bid.

POLICY MEMORANDUM NO. PM-6**BORINGS LOGS**

All soil borings shall be taken as close as practicable to the construction line, and the location of all such borings shall be clearly indicated on the contract drawings. The plan view shall show the location and boring number of each boring. The profile view shall show the location, elevation, and depth of each soil boring, the location of each change in soil stratum, the groundwater level, and the average of blow counts at each five foot interval. As a minimum, boring logs to be submitted with the plans and specifications shall show the name of the company taking the borings, the soil classification, the number of blows per foot of penetration, the groundwater elevation, and the date on which the borings were taken.

As part of the submission of plans and specification for approval, the owner's representative shall include written justification for the lesser frequency and depth of borings where their interval is more than approximately 300' or their depth is less than 50% below depth of pipe invert.

POLICY MEMORANDUM NO. PM-7**BREAKDOWN OF BID ITEMS**

The following items shall, where applicable, be listed separately in the bid documents.

1. Mobilization
2. Pavement
 - a. Municipal
 - i. temporary
 - ii. permanent
 - b. State
 - i. temporary
 - ii. permanent
3. Concrete cradle or encasement
(to be identified where applicable)
4. Rock-Excavation
5. Wood or steel sheeting left in place
6. Excavation of unsuitable materials below grade.
7. Select and/or borrow material
8. Dewatering
9. Special Dewatering (coffer dam)

Mobilization costs are the costs of initiating the contract, exclusive of the cost of materials. Payment for mobilization shall be a lump sum at the price bid for this item in the proposal and shall be payable when the contractor is operational on the site. For purposes of this policy, “operational” shall mean the substantial commencement of work on site.

The lump sum price bid for mobilization shall not exceed five per centum (5%) of the total amount of the bid.

POLICY MEMORANDUM NO. PM-8**PAVEMENT**

All roads and trenches therein shall be refilled and repaved in accordance with specifications provided by the owner in the contract documents. Please note that this policy may be excludable on federally assisted projects where bid alternative items may be required (i.e. trench width vs. full width pavement). You are advised to seek project specific clarification.

Loan eligibility shall be limited to the following:

- A. Where the depth of the pipe invert is 0 to 8', the maximum pavement widths which shall be eligible for financial assistance are as follows:

<u>Nominal Pipe Diameter</u>	<u>Maximum Eligible Widths</u>	
	<u>Initial Pavement</u>	<u>Permanent Trench</u>
0-24"	6'-6"	8'-6"

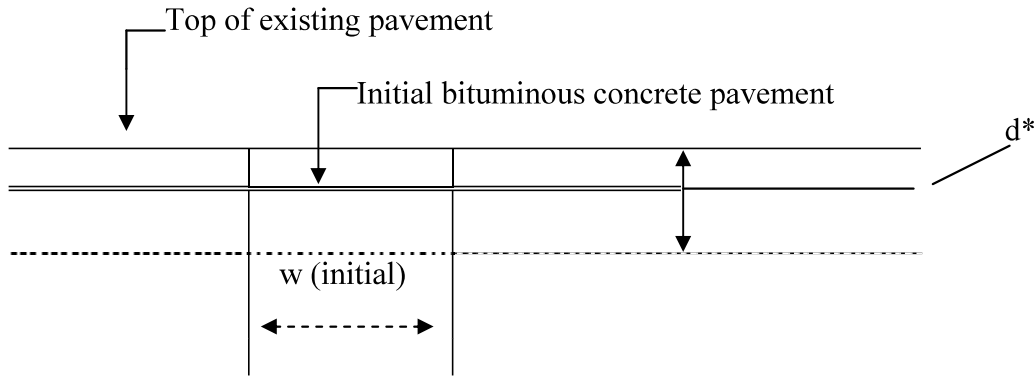
Where the nominal pipe diameter is greater than 24" the maximum eligible width for initial re-paving shall be the nominal diameter of the pipe plus four (4) feet, and for permanent trench re-paving the maximum eligible width shall be the nominal pipe diameter plus six (6) feet.

- B. For each additional four (4) feet (or fraction thereof) of pipe invert depth, add three feet to the eligible width limits stated in paragraph A.

Policy Memorandum No. PM-8 – Pavement (Con't)

At the design phase of a project the owner has the option to elect either Initial Pavement with Option I (Permanent Trench replacement) or Initial with Option II (curb to curb over initial)

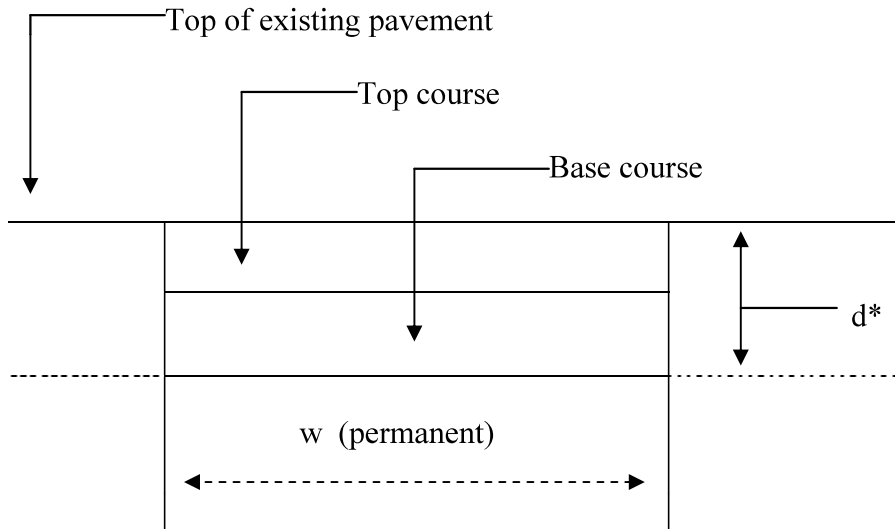
Initial Pavement



d* = depth of existing pavement to a maximum of 3 inches (see general notes #3)

w = maximum eligible Initial pavement width as described in paragraphs “A” & “B” on page DEP-DMS-CG’s-P4.

OPTION I Permanent Trench Pavement

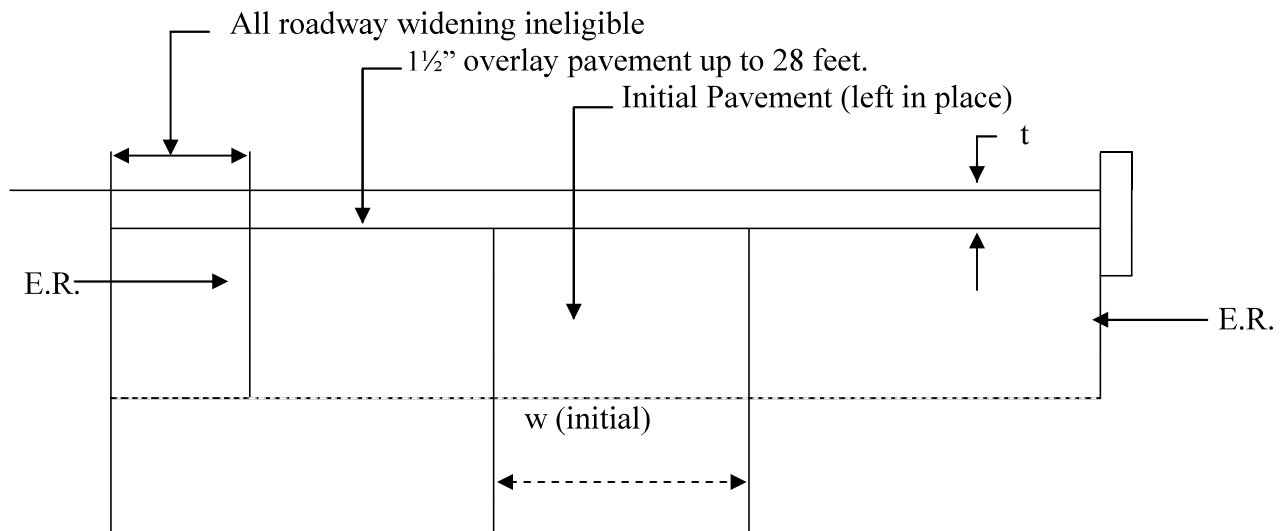


d* = depth of existing pavement trench to a maximum of 3 inches (see general notes #3)

w = maximum eligible permanent pavement width as described in paragraphs “A” & “B”. equals initial width plus 2 feet and includes:

- Cutting edges for the permanent trench
- Removal of initial patch plus two feet of existing pavement
- Fine grading/compacting gravel
- Placement of Permanent Trench pavement in two courses.

OPTION II Curb to Curb Pavement (overlay pavement for roadways up to 28 feet)



E.R.= edge of existing paved roadway

t = one and one half inch (1½") overlay of bituminous concrete pavement

GENERAL NOTES:

1. Repavement of settled areas and crown restoration within the trench limits shall be the responsibility of the contractor.
2. Leveling outside the trench limits shall be the responsibility of the owner.
3. Sewer trench re-fill and pavement re-paving on public ways under the jurisdiction of the Massachusetts Department of Public Works, the Metropolitan District Commission, or other such agency shall be in accordance with permit(s) issued therefore by that Department or Commission, as the case may be.
4. The Division will consider requests for increase in the participating pay limits defined in paragraphs A and B, when such increases are, in the Division's opinion, reasonable. Such requests should be documented in writing and submitted to the Division in a timely manner.
5. Projects which deviate from the above options are required to seek Division review and approval.

POLICY MEMORANDUM NO. PM-9

PIPE TESTING

Monthly payment estimates shall be prepared in accordance with contract documents. All pipe shall be tested in accordance with the contract documents and sound engineering practice. If, after 60 days following submission of a monthly payment estimate for pipe items, the pipe for which payment is requested has not been successfully tested, the owner may withhold up to 10% of the amount requested for such pipe items until the pipe has been so tested. However, in the case of a major (pipe diameter 24 inches or greater) interceptor pipe installation, sums retained by the owner pursuant to this policy memorandum shall not exceed two per centum (2%) of the costs of such pipe items.

POLICY MEMORANDUM NO. PM-10

CHANGE ORDERS

Executed change orders submitted to the Division for review and processing for financial assistance must be prepared on the attached Change Order Forms (PM-10, Attachment 1, pages A-1 & A-2) with a duplicate copy, calculation sheet(s) (PM-10, Attachment 2), and all other supporting documentation necessary for evaluation. Failure to comply with these instructions will result in delays in processing the change order and/or limited financial assistance.

M.G.L. c.44, s.31C requires that the auditor, accountant, or other municipal officer having similar duties must certify that adequate funding in an amount sufficient to cover the total cost of the change order has been made. Change orders will not be processed or approved until this certification is made on the face of the Change Order Form (PM-10 Attachment 1).

Payment of Change Orders:

Payment of all change orders shall be in accordance with the relevant provisions of Massachusetts General laws, Chapter 30, Section 39G for non-building construction and Section 39K for building construction.

Payment of change orders shall be made in accordance with one of the following three methods:

- A. Existing unit prices as set forth in the contract; or
 - B. Agreed upon lump sum or unit prices; or
 - C. Time and materials
- A. Payment for work for which there is a unit price in the contract:

Where the contract contains a unit price for work and the Engineer orders a change for work of the same kind as other work contained in the contract and is performed under similar physical conditions, the contractor may accept full and final payment at the contract unit price(s) for the acceptable quantities.

Policy Memorandum No. PM-10 – Change Orders (Con't)

B. Payment for work or materials for which no price is contained in the contract:

If the Engineer directs, the contractor shall submit promptly in writing to the Engineer and offer to do the required work on a lump sum or unit price basis, as specified by the Engineer. The stated price, either lump sum or unit price, shall be divided so as to show that it is the sum of:

- (1) The estimated cost of labor, plus
- (2) Direct Labor Cost, plus
- (3) Material and Freight Costs, plus
- (4) Equipment Costs, plus
- (5) An amount not to exceed 20% of the sum of items (1) through (4) for overhead and profit, plus (if applicable),
- (6) In the case of work done by a subcontractor an amount not to exceed 7 ½ %, for the general contractor of the sum of items (1) through (4) for his overhead and profit, less, if applicable,
- (7) Credits for work deleted from the contract.

C. Payment for work on a time and materials basis:

Unless an agreed lump sum and/or unit price is obtained from above and is so stated in the change price, the contractor shall accept as full payment for which no other agreement is contained in contract, and amount equal to:

- (1) The estimated cost of Labor, plus
- (2) Direct Labor Cost, plus
- (3) Material and Freight Costs, plus
- (4) Equipment Costs, plus
- (5) An amount not to exceed 20% of the sum of items (1) through (4) for overhead and profit, plus (if applicable),
- (6) In the case of work done by a subcontractor an amount not to exceed 7 ½ %, for the general contractor of the sum of items (1) through (4) for his overhead and profit, less, if applicable,
- (7) Credits for work deleted from the contract.

Explanation of items (1) through (7) as outlined in “B” and “C”:

- (1) Labor – Only those workers employed on the project who are doing the extra work, including the foreman in charge, are allowable. General foremen, superintendents, or other supervisory personnel are considered to be included in the overhead markup as provided in items (5) and/or (6). Hourly labor rates in excess of those as listed in the contract wage rates (Federal or State, whichever applies) require documentation. As a minimum, an explanation and the appropriate copy of the certified payroll are required.

Policy Memorandum No. PM-10 – Change Orders (Con't)

(2) **Direct Labor Costs** - These costs are limited to those which are required in the contract document. Coverage in excess of the contract provisions, secured by the contractor/subcontractor(s) at his option, are ineligible for financial assistance. The following list of typical direct labor charges is provided for your assistance and is in no way intended to be complete or all encompassing:

- Workman's Compensation
 - Federal/State: Social Security Tax and Unemployment Tax;
 - Health, Welfare and Pension Benefits; (this cost is included in the wage rates appearing in the Mass. Wage Rates of the contract specifications)
 - Liability Insurance: Bodily Injury;
 Excess Umbrella;
 Property damage;
 Public Liability
 - Blasters Insurance)
)
 - Builders Risk Insurance)
)
 - Experience Modification Insurance)
)
 - Surcharges)
- If applied to any required direct labor costs.

Following the Notice of Intent to Award, the Owner shall require the Low Bidder to submit the percentage to be used for the Direct Labor Cost markup, along with the breakdown of how it is calculated (this number shall be required and submitted to MassDEP before and Authorization to Award is issued by DMS). This documented direct labor cost may be adjusted upon the submission of new documentation which demonstrates both how and why it has changed.

(3) Material and Freight – Only those materials required as a result of the change order and reasonable freight charges for delivery of same are allowable.

Policy Memorandum No. PM-10 – Change Orders (Con't)

- (4) Equipment – Only the equipment required as a result of the change order is allowable. Equipment rental rates shall be governed by the current Nielson/Dataquest Rental Rate bluebook for Construction Equipment (the “Bluebook”). In determining the rental rate the following shall apply:
- (a) For equipment already on the project – the monthly prorated rental rate by the hourly use shall be applicable;
 - (b) For equipment not on the project the daily rate, the weekly rate, or monthly rate will prevail, whichever will prove to be most cost effective. Small tools and manual equipment are examples of costs not allowable under this item. These costs are considered to be included in the overhead markup as provided in items (5) and/or (6) (1 month (normal use) = 176 hours)
- (5) & (6) Overhead and Profit – All other costs not previously mentioned are considered to be included in this item, be it for the general contractor or subcontractor(s).
- (7) Credits – Work deleted, material and equipment removed from the contractor, stored and/or returned shall be credited to the cost of the change order, less costs.

The Contractor shall furnish itemized statements of the cost of the work ordered and shall give the Engineer access to all accounts, bills and vouchers relating thereto; and unless the Contractor shall furnish such itemized statements, and access to all accounts, bills and vouchers, he shall not be entitled to payment for any items of extra work for which such information is sought by the Engineer. Deviations from any of the above will be reviewed for financial assistance on a case-by-case basis.

The change order will be prepared in such manner as to clearly separate Eligible and Ineligible Costs.

CHANGE ORDER FORM

PM-10 Attachment 1

Page 1 of 2

SRF Number _____
Public Entity _____
Contract Number _____
Change Order Number _____

Contract Amount (As Bid) \$ _____

Net Change in Contract Price (this change order) \$ _____

Total Adjusted Contract Price (including this and all other change orders) \$ _____

This change order extends the time to complete the work by _____ calendar days.

The extended completion date is _____

This change order checked by _____
(Chief) Resident Engineer Date

This change order is requested by: _____

This change order is recommended by: _____

Consultant Engineer P.E. Number Date

The undersigned agree to the terms of the change order.

Contractor Date

Owner Date

Certification of Appropriation under M.G.L. c.44, §31C: Adequate funding in an amount sufficient to cover the total cost of this change order is available.

By: _____
Certification Officer (Auditor, accountant, treasurer) Date

Do not write below: this space reserved for STATE AGENCY APPROVAL

DEP/DMS

CHANGE ORDER FORM **(Continued)**

Public Entity _____

SRF No: _____ Contract No. _____ Change Order No. _____

Contract Title: _____

Owner’s Name: _____

Owner’s Address: _____

Contractor’s Name: _____

Contractor’s Address: _____

Description of Change

Reason for Change

CALCULATION SHEET

(1) Labor

Foreman	10 hrs @ \$10.00/hr.	\$	100.00	
Engineer	10 hrs @ 8.50/hr		85.00	
Operator	10 hrs @ 9.50/hr		95.00	
Laborers	24 hrs @ 7.00/hr		<u>168.00</u>	
				\$448.00

(2) Direct Labor Cost (use the agreed upon Direct Labor Cost)

*	(30)% of \$448	
*	(Used for example purposes only)	134.00

(3) Materials & Freight

150 l.f. of 12" pipe @ \$2.00/l.f.	\$	300.00	
15 v.f. precast SMH		1,700.00	
Freight (slip # _____ Enclosed)		<u>25.00</u>	
			2,025.00

(4) Equipment

1 Backhoe 10 hrs @ \$80.00/hr	\$	800.00	
1 Truck-crane 10 hrs @ \$100.00/hr		<u>1,000.00</u>	
			<u>1,800.00</u>
Total (Items 1 through 4)			4,407.00

(5) 20% markup for Overhead, Profit

20% of \$4,407	881.00
----------------	--------

(6) 7 ½% markup for general contractor (if subcontractor is involved)

7 ½% of \$4,407	331.00
-----------------	--------

(7) Credits (deductibles)

- 323.00

Total Cost \$ 5,296.00

Reminder: Provide support documentation as necessary i.e. vouchers, correspondence,
Calculation, photographs, reports

POLICY MEMORANDUM NO. PM-11**UTILITY RELOCATION**

The construction of treatment facilities, sewers, pumping stations, force mains and appurtenant work can cause the relocation of utilities. Costly relocation can sometimes be minimized by early communication and cooperation of the representatives of the municipality (owner) and the utilities.

Every possible effort should be made by the owner and each utility to establish the location of existing utilities in the vicinity of the proposed construction. The owner or its consulting engineer should make every reasonable effort to design the proposed construction so that relocation of existing utilities is minimized whenever possible. If the proposed construction is in an area of many existing utilities or in an otherwise critical area, the utilities are encouraged to mark the location of their existing utilities at the site during the design phase of the project.

During the design phase of the project, the municipality should provide timely notice to all utilities known or thought to have facilities in or proximate to the site of such future construction.

POLICY MEMORANDUM NO. PM-12**REFUNDABLE DEPOSITS FOR
PLANS AND SPECIFICATIONS**

For each set of project plans and specifications provided, the owner may require a deposit in form of cash or other appropriate security, in an amount sufficient to cover the costs of production of such plans and specifications.

Upon return of the plans and specifications to the owner within a reasonable time and in good condition, such deposit shall be refunded.

Actual mailing costs, if any, shall be borne by the party requesting such plans and specifications.

POLICY MEMORANDUM NO. PM-13**BID OPENING PROCEDURES**

As a minimum, bid documents shall be reviewed/inspected for conformance to the following bid opening procedure in the order presented below. Failure to comply with any of these steps shall render the bid non-responsive and upon determination of such non-responsiveness, such bid shall be rejected immediately, set aside, and shall receive no further consideration.

Bid Opening Procedure

Step #1. Timeliness – The bid must be filed at the place and within the time specified therefore in the invitation to bid, and no bid shall be accepted after such time. The time at which a bid is filed should be time/date stamped or otherwise prominently noted on the bid;

Policy Memorandum No. PM-13 – Bid Opening Procedures (Con't)

Step #2. Bid Security – Properly executed bid security, in the amount and terms specified in the invitation to bid (equal to 5% of Base Bid or Highest Possible Amount considering all alternatives) shall be placed in a seal envelope and attached to the outside of the envelope containing the bid at the time of its submission;

A. Bid Bond

The Bid bond must be dated On or Before the Bid Date;
Issued by a Bonding Company Licensed in Massachusetts;
Accompanied by a Current Power of Attorney;
Signed by Surety;

B. Check

The Check must be a Certified, Cashiers or Bank Treasurer's;
Dated On or Before the Bid Date;

Step #3. Bid Signature – The bid and all accompanying documents so required shall be signed by the bidder or its authorized representative before submission;

Step #4. Addenda – All addenda shall be sent certified mail, return receipt requested, by the owner to all individuals and organizations which have received plans and specifications and shall be mailed not later than five days prior to the date established for submission of bids. All bidders shall include with their bids written acknowledgement of receipt of all addenda, which acknowledgement may be on a form provided therefore by the owner.

Alternates – Any Alternates shall be acknowledged.

Step #5. Written Dollar Amounts – The total dollar amount of each bid shall be read, and the three lowest bids shall be selected for further consideration. The remaining bids shall then be set aside. The three apparent low bids shall be read to determine whether the unit price for each line item of each bid has been written therein in words. If it has not, such bid shall be rejected and shall receive no further consideration. ***Bid amounts shall be consistent (words vs. numbers) and if words and numbers differ, the words govern.*** This procedure shall then be repeated with the next apparent low bid until three are acceptable which have all the unit prices written in words, at which time the lowest bid shall be announced as the apparent low bidder, and the bid opening procedure shall be closed.

The Division recommends that this policy memorandum be included in all contract specifications and that the owner's evaluator(s) use the attached form (PM-13 Attachment 1) for bid opening procedures.

The Contractor's Bid Opening Checklist also attached hereto, is for use by each contractor to assure that his bid conforms with this policy memorandum. It is recommended that the checklist (PM-13 Attachment 2) be included in information for bidders, or at the end of the bid proposal, or in some other prominent part of the bid specifications

FORM FOR BID OPENING PROCEDURES (to be completed by the owner's evaluator(s))

CONTRACT NO.: _____ DATE: _____

CONTRACT NAME: _____ BID OPENING TIME: _____

All non-responsive bids shall be rejected forthwith by the awarding authority upon determination of such bids' non-responsiveness at the time bids are opened and read. Failure to comply with any one of the requirements shall render the bid non-responsive, and upon determination of such non-responsiveness such bid shall be rejected and receive no further consideration.

		A = Acceptable		N-R = Non-Responsive (explain reasons on supplemental sheet & attach)			
BIDDER	1. TIMELINESS	2. BID SECURITY	3. SIGNATURE	4. ADDENDA ALTERNATIVES	WRITTEN 5. DOLLAR AMOUNTS	COMPLIANCE (CIRCLE ONE)	
1						YES NO	
2						YES NO	
3						YES NO	
4						YES NO	
5						YES NO	
6						YES NO	
7						YES NO	
8						YES NO	
9						YES NO	
10						YES NO	
11						YES NO	
12						YES NO	

Evaluator(s) _____

BID OPENING PROCEDURES CONTRACTORS CHECKLIST

CONTRACT NO.: _____ BIDDER: _____ DATE: _____

All non-responsive bids shall be rejected forthwith by the awarding authority upon determination of such bids' non-responsiveness at the time bids are opened and read. Failure to comply with one or more of the following requirements shall render the bid non-responsive, and upon determination of such non-responsiveness such bid shall be rejected and receive no further consideration.

ITEM	REQUIREMENTS	COMPLIANCE (CIRCLE 1)		REASONS FOR REJECTION
		Yes	No; Rejected	
1. Timeliness	Bid filed w/in time specified	Yes	No; Rejected	
2. Bid Security	Appropriate and properly Executed security w/bid.	Yes	No; Rejected	
3. Signature	Bid signed by authorized Representative	Yes	No; Rejected	
4. Addenda	All addenda acknowledge Any alternative	Yes	No; Rejected	
5. Dollar Amount	Dollar amount in words Specified for each line item in bid	Yes	No; Rejected	

POLICY MEMORANDUM NO. PM-14**PAYMENT FOR ROCK EXCAVATION**

There shall be in the contract documents a separate pay item for rock excavation. For such purposes, “rock” shall mean igneous, sedimentary, metamorphic, and conglomerate rock, which for excavation must be drilled, blasted, broken, or ripped by power tools. Boulders and concrete structures one cubic yard or greater, however removed, are included within this definition of rock for payment purposes. At the option of the owner or his representative a separate pay item for boulders, concrete structures, or concrete road base may be used.

<u>Depth From Ground Surface</u> <u>To Invert Pipe</u>	<u>Pay Width</u> <u>(Nominal Pipe Diameter)</u>	
* 0 – 12’	<u>0-24”</u>	<u>Over 24”</u>
* Over 12’ – 20’	5’0”	D+3’0”
	7’0”	D+5’

Engineer’s plans and specifications shall establish pay limits below pipe and structures.

- See PM-14 Attachment 1 (typical cross section)

Payment width for depths over twenty feet (20’) shall be determined on a case-by-case basis consistent with the foregoing chart.

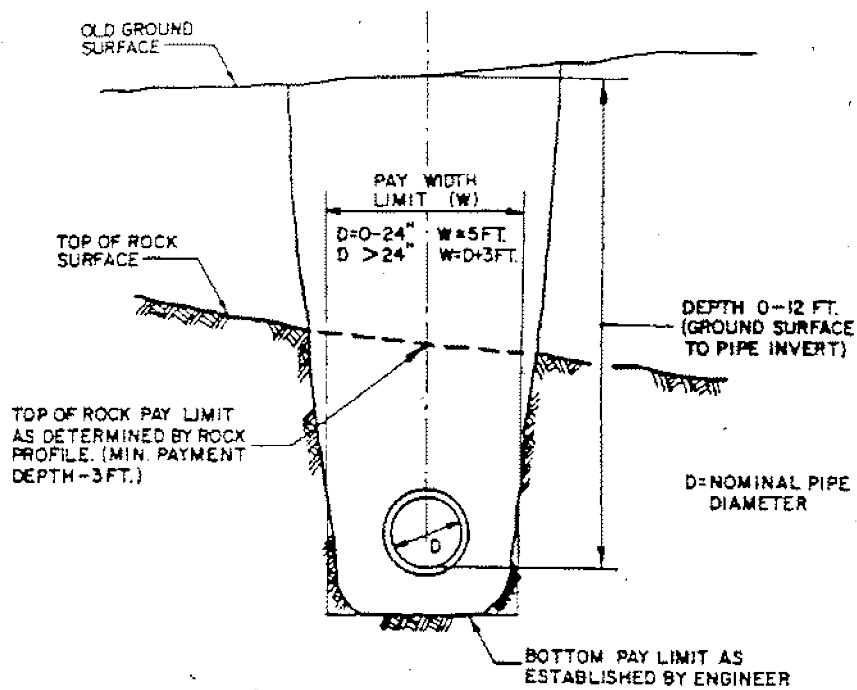
The pay limit for rock removal outside proposed manholes shall commence one foot (1’) outside the widest dimension of the structure of shall be the maximum connecting trench width, whichever is greater.

Payment depth for rock which is encountered in a trench shall be no less than three feet (3’) when removal can be accomplished only by drilling and blasting or by use of jack (air or hydraulic) hammers.

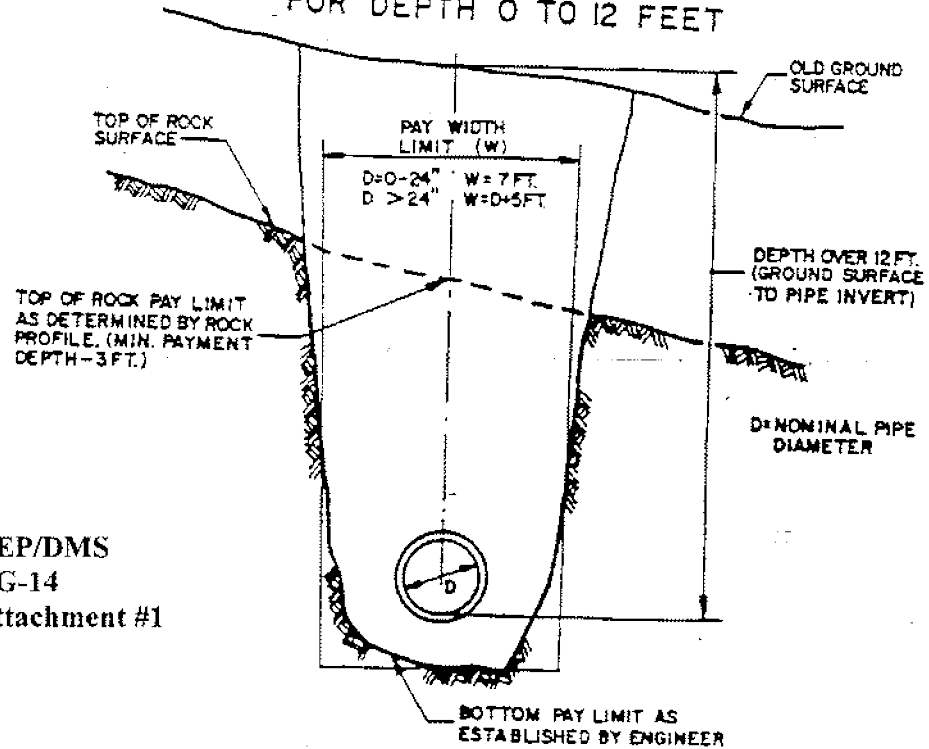
Payment for rock removed, using the same or equal equipment as utilized for normal trench excavation, shall be limited to the actual depth removed within the limits established by the contract documents.

Boulders encountered within the pay limits of excavation, whose volume is one cubic yard or greater, part of which extends outside said limits shall be paid in accordance with the actual volume excavated.

CG-14 ROCK EXCAVATION



FOR DEPTH 0 TO 12 FEET



FOR DEPTH OVER 12 FEET AND UP TO 20 FEET

DEP/DMS
CG-14
Attachment #1

POLICY MEMORANDUM NO. PM-15**TRAFFIC POLICE**

The reasonable costs for police details required for traffic control on a construction project which receives financial assistance shall be considered as an eligible administrative cost. A police detail item shall not be included as a bid item in the contract documents.

“Police” as used in this memorandum includes local, county, capital, state, regular and auxiliary police.

Owner’s Responsibility

It shall be the owner’s responsibility to submit in writing the hourly rate of pay to be established for detailed traffic police and each change in rate during the course of the project. It is the owner’s responsibility to arrange, document and pay for such police details. The owner or its representative shall meet with the police chief or other officer in charge of police detail duty to review contract needs. The owner shall maintain a daily record of the following:

- a. Officer’s name
- b. Hours worked
- c. Location of assignment
- d. Hourly rate

POLICY MEMORANDUM NO. PM-16**DOCUMENTATION REQUIRED TO
SUBSTANTIATE CONTRACT QUANTITIES****Unit****Documentation required**

Acres (A)	Location, station, offset and calculations. Location = Street right-of-way, etc; Station = Point on Baseline; Offset = Distance left or right of Baseline
Cubic Yard (C.Y.)	Location, stations, widths, depths, calculations and Cross sections as necessary
Each (Ea.)	Location, station, and offset.
Gallon (Gal.)	Location, stations, calculations (if appropriate) and delivery slips.
Hour (Hr.)	Hours and location.
Linear Feet (L.F.)	Location, stations, and offsets.
Month (Mo.)	Location, period of time and calculations if applicable.

1000 Foot Board Measure (MFBM)	Location, stations, offset, elevations, grade, and calculations. Attach invoices where applicable.
Pound (Lb.)	Locations, stations, and calculations (if applicable). Attach Delivery weight slips.
Square Feet (S.F.)	Locations, stations and calculations
Square Yard (S.Y.)	Locations, stations and calculations
Ton	Locations, stations and calculations (if applicable). Attach Delivery weight slips.
Vertical Feet (V.F.)	Locations, stations, elevations, and offsets.

Note:

1. All of the above, that apply must be submitted with a final payment request or change order as applicable.
2. Where in place measurement is not possible or practical, delivery slips may be used to substantiate quantities.
3. Change orders – See PM-10 in which some of the above may be applicable in justifying materials, equipment and labor.
4. When necessary, itemized quantities must be separated into eligible and non-eligible units with separate calculations to justify eligible costs.
5. Overruns and underruns of any specific item shall be explained with an appropriate sentence or paragraph.
6. On all quantities, units of payment shall be maintained at the project site and shall be updated daily so that upon field inspection by the C.O.E., EPA or DMS, the quantities paid to date can be substantiated.
7. In the case of unforeseen conditions, photos should be submitted with the applicable item in addition to the recommended documentation.
8. Documentation of units of payment shall be clearly legible and cross referenced to the applicable sheets of the record drawings.
9. For record drawings policy, please see PM-4.

DMS Policies 1 through 16 Approved By:

Steven J. McCurdy
Division of Municipal Services

DWS POLICY 88-02
DEPARTMENT OF ENVIRONMENTAL PROTECTION
POLICY FOR REVIEW OF SEWER LINE/WATER SUPPLY PROTECTION

The Department of Environmental Protection seeks to protect existing and potential water supplies from the potentially negative effects of leaking sewer lines through the adoption of a Department policy on this subject.

The following restrictions will apply to new sewer construction statewide:

Gravel Packed Wells

- ~ Within the 400 foot radius protective distance around gravel packed wells, all sewer lines and appurtenances are prohibited, unless they are necessary to eliminate existing and/or potential sources of pollution to the well.

Tubular Wells

- ~ Within the 250 foot radius protective distance around tubular wells, all sewer lines and appurtenances are prohibited, unless they are necessary to eliminate existing and/or potential sources of pollution to the well.

Gravel Packed and Tubular Wells

- ~ Within a minimum radius of 2,640 feet or unless otherwise documented by an appropriate study specifically defining the area of influence and approved by the Division of Water Supply, all sewer lines and appurtenances will be designed and constructed for maximum water tightness.
- Force Mains or Pressure Sewers: shall be tested at 150% above maximum operating pressure or 150 p.s.i. whichever is greater. Testing shall conform to the requirements of the American Water works Association (AWWA) standard c 600.
- Gravity Sewers: shall be tested by approved methods which will achieve test results for infiltration or exfiltration of less than 100 gallons/inch diameter/mile/24 hours.
- Manholes: shall be installed with watertight covers with locking or bolted and gasketed assemblies. Testing for infiltration/exfiltration shall conform to the same standards as the maximum allowed for pipes in the manhole as required for gravity sewers, indicated above.
- Satisfactory test results for Force Mains, Manholes and Gravity Sewers shall be performed prior to the expiration of the contractor's one year guarantee period.
- All pumping stations within this zone shall have standby power high water alarms telemetered to an appropriated location that is manned at all times. An emergency contingency plan must be developed by the owner and approved by the BWR.
- A minimum of Class B bedding as defined by WPCF-MOP9 must be used for all piping.
- Service connections (laterals and house connections) shall be rigidly inspected by the appropriate municipal official. Certified inspection reports shall be submitted to the BWR.

Bedrock Wells

The above requirements are the same for bedrock wells, with the Department reserving the right to require more stringent controls on a case-by-case basis.

Surface Water Supplies

- ~ Within 100 feet of all surface water supplies and tributaries all sewer lines and appurtenances are prohibited except as required to cross tributaries or to eliminate existing or potential pollution to the water supply. In the latter case, watertight construction methods shall be use.
- ~ Tributary stream crossings shall employ watertight construction methods of sewer lines and manholes. Watertight construction must extend 100 feet to either side of the stream.
- ~ Within 1,000 feet of surface water supplies and tributaries, all pumping stations shall have standby power and high water alarms telemetered to an appropriate location that is manned at all times. An emergency contingency plan must be developed by the owner of the wastewater treatment facility and submitted to the BWR for approval.
- ~ Beyond 1,000 feet and within the watershed of surface water supplies the Department may in specific circumstances after review, require additional controls.

Potential Public Water Supplies

The above requirements also apply to potential public water supplies.

Baseline Data Requirements

Two (2) copies of an appropriately scaled map(s) shall be submitted to the Department which details the proposed sewers and/or appurtenances and also includes the following:

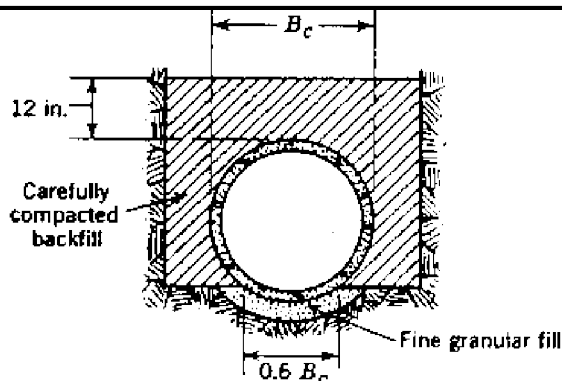
- (1) the location of all nearby existing or potential surface water supplies, tributaries thereto, and watershed boundaries;
- (2) the location of existing and potential public and municipal potable groundwater supply wells.

The Department reserves the right to impose more restrictive measures than those contained in this policy as deemed appropriate.

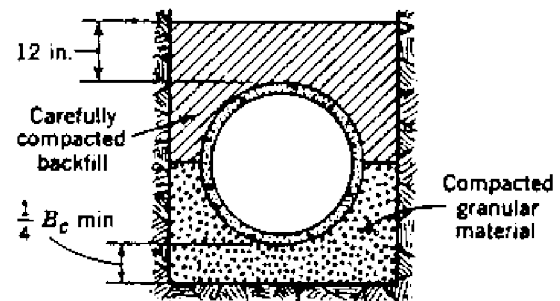
Definitions

- Appurtenances – all attachments to sewer lines necessary for the transport and operation and maintenance of sewer lines, including manholes, pumping station, siphons, etc.
- Area of influence – that area of an aquifer which contributes water to a well under the most severe recharge and pumping condition that can be realistically anticipated (i.e. pumping at the safe yield of the well for 180 days without any natural recharge occurring). It is bounded by the groundwater divides which result from pumping the well and by the contact of the edge of the aquifer with less permeable materials such as till and bedrock. At some locations, streams and lakes may form recharge boundaries.
- Potential public water supply – areas designated by communities for water supply purposes where land has been set aside and Department approved pump tests conducted and surface water supplies as defined below.
- Surface Water Supply – Waters classified as Class A by the DWPC.
- Public Water Supply Systems – as defined in 310 CMR 22.02 (DEP Drinking Water Regulations).
- Class B Bedding – as defined in WPCF Manual of Practice No. 9.

APPROVED: (Signature on File)



Shaped bottom with tamped backfill,
load factor 1.9



Compacted granular bedding,
load factor 1.9

Class B---First-Class Bedding – Class B bedding may be achieved by either of two construction methods:

- a. **Shaped Bottom with Tamped Backfill.** The bottom of the trench excavation shall be shaped to conform to a cylindrical surface with a radius at least 2 in. (5 cm) greater than the radius to the outside of the pipe and with a width sufficient to allow six-tenths of the width of the pipe barrel to be bedded in fine granular fill placed in the shaped excavation. Carefully compacted backfill shall be placed at the sides of the pipe to a thickness of at least 12 in. (30 cm) above the top of the pipe. Shaped trench bottoms are difficult to achieve under current construction conditions.
- b. **Compacted Granular Bedding with Tamped Backfill.** The pipe shall be bedded in compacted granular material placed on a flat trench bottom. The granular bedding shall have a minimum thickness of one-fourth the outside pipe diameter and shall extend halfway up the pipe barrel at the sides. The remainder of the side fills and a minimum depth of 12 in. (30 cm) over the top of the pipe shall be filled with carefully compacted material.

ATTACHMENT G

BUILD AMERICA, BUY AMERICA REQUIREMENTS
AND AMERICAN IRON AND STEEL

APPENDIX I

BUILD AMERICA, BUY AMERICA ACT (BABA)

AMERICAN IRON AND STEEL (AIS)

ATTACHMENTS

1. **Information Checklist for Waiver Request**
2. **HQ Review Checklist for Waiver Request**
3. **Example Loan Agreement Language**
4. **Sample Construction Contract Language**
5. **Sample Certification 1**
Sample Certification 2

Appendix I

Build America, Buy America (BABA) Requirements




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

November 3, 2022

MEMORANDUM

SUBJECT: Build America, Buy America Act Implementation Procedures for EPA Office of Water Federal Financial Assistance Programs

FROM: RadhikaFox
Assistant Administrator 

TO: EPA Regional Water Division Directors, Regions I - X
EPA Office of Water Office Directors

OVERVIEW

The Biden-Harris Administration recognized the Nation's critical need for infrastructure investment, championing the Bipartisan Infrastructure Law (BIL), which Congress passed on November 15, 2021 (also known as the Infrastructure Investment and Jobs Act (IIJA)). The BIL will provide an unprecedented level of federal investment in water and wastewater infrastructure in communities across America.

In Title IX of the IIJA, Congress passed the Build America, Buy America (BABA) Act, which establishes strong and permanent domestic sourcing requirements across all Federal financial assistance programs for infrastructure. The U.S. Environmental Protection Agency (EPA) Office of Water is honored to help lead the implementation of these provisions and is proud of its near decade of successful implementation of the American Iron and Steel (AIS) provisions for its flagship water infrastructure programs.

This is a transformational opportunity to build a resilient supply chain and manufacturing base for critical products here in the United States that will spur investment in good-paying American manufacturing jobs and businesses. EPA's efforts to implement BABA will help cultivate the domestic manufacturing base for a wide range of products commonly used across the water sector but not currently made domestically. This will take time, and flexibility will be important to ensure that EPA can leverage critical water investments on time and on budget to protect public health and improve water quality.

IMPLEMENTATION

Recognizing the opportunity and need for BABA implementation guidance, the Made in America Office (MIAO) of the Office of Management and Budget (OMB) published [Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure](#) (OMB Guidance M-22-11) on April 18, 2022. The guidance provides government-wide implementation direction for all Federal financial assistance programs for infrastructure. Despite the extensive guidance developed by MIAO, EPA's Office of Water infrastructure investment programs have received many questions that were not addressed in OMB Guidance M-22-11 or that require further clarification for EPA water infrastructure programs. The following questions and answers serve to supplement OMB Guidance M-22-11 with implementation procedures specific to EPA's relevant water infrastructure programs.

Section 70914(a) of the IIIA states when a Buy America preference under BABA applies: "Not later than ... [May 14, 2022], the head of each Federal agency shall ensure that none of the funds made available for a Federal financial assistance program for infrastructure...may be obligated for a project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States." Therefore, Federal financial infrastructure investments obligated on or after May 14, 2022, must comply with the BABA requirements. Absent a waiver, all iron, steel, manufactured products, and construction materials permanently incorporated into an infrastructure project subject to the BABA requirements must be produced in the United States. For many of EPA's Office of Water infrastructure investment programs, the vast majority of products permanently incorporated into construction, maintenance, or repair projects must comply with the BABA requirements, with the exception of select construction materials (cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives), which are specifically excepted by the BABA statute.

EPA's Office of Water implements many infrastructure investment programs subject to BABA requirements, including the following:

- Alaska Native Villages and Rural Communities Water Grant Program (ANV) (and any associated Interagency Agreements with the Indian Health Service)
- Clean Water and Drinking Water State Revolving Fund Programs (CW and DWSRF)
- Clean Water and Drinking Water Grants to U.S. Territories and the District of Columbia
- Clean Water Indian and Drinking Water Tribal Infrastructure Grant Set-aside (and any associated Interagency Agreements with the Indian Health Service)
- Coastal Wetlands Planning, Protection and Restoration Act, (CWPPRA) Programs
- Congressionally Directed Spending/Community Project Funding (also known as Community Grants)
- Geographic Programs¹
- Gulf Hypoxia Program
- National Estuaries Program (CWA Section 320)

¹ Geographic Programs include: Great Lakes Restoration Initiative, Chesapeake Bay, San Francisco Bay, Puget Sound, Long Island Sound, Gulf of Mexico, South Florida, Lake Champlain, Lake Pontchartrain, Southern New England Estuaries, Columbia River Basin, Pacific Northwest

- 319 Nonpoint Source Management Program Implementation
- Reducing Lead in Drinking Water Grant Program (SDWA §1459B)
- Assistance for Small and Disadvantaged Communities Grants: Small, Underserved, and Disadvantaged Community Grant Program (SUDC), Emerging Contaminants in Small or Disadvantaged Communities (EC-SDC) and Drinking Water Infrastructure Resilience & Sustainability (SDWA §1459A)
- Sewer Overflow and Stormwater Reuse Municipal Grants (OSG)
- USMCA Implementing Legislation (Section 821 and Title IX, USMCA Supplemental Appropriations, 2020)
- U.S.-Mexico Border Water Infrastructure Program
- Voluntary School and Child Care Program Lead Testing and Remediation Grant Program (SDWA 1464(d))
- Water Infrastructure Finance and Innovation Act (WIFIA)

The questions and answers in this document apply to the implementation of BABA requirements for the Office of Water infrastructure programs listed above unless superseded by regulation, statute, or other applicable guidance. For many of the programs listed above which did not have domestic preference requirements prior to BABA, additional implementation details are pending or may be developed after the issuance of these procedures. In addition, EPA notes that more direction will be helpful to inform the determination and definition of domestic content in manufactured goods. Supplemental guidance on these and other issues, from either OMB or EPA, may be forthcoming. These implementation procedures may also apply to additional, unlisted EPA programs which may be required to apply BABA subsequent to publication of this memorandum (e.g., future funding programs which have been authorized, but not yet appropriated).

For more information on the BABA requirements, visit the EPA Office of Water's dedicated website – <https://www.epa.gov/cwsrf/build-america-buy-america-baba> – or contact your funding authority (such as your grants officer, portfolio manager, or state contact). For information on approved waivers, visit <https://www.epa.gov/cwsrf/build-america-buy-america-baba-approved-waivers>. You may also email questions to BABA-OW@epa.gov.

This Implementation Procedures document is organized to provide responses to questions in the following topic areas:

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QUESTIONS AND ANSWERS

SECTION 1: GENERAL

- Q1.1: Will EPA provide documentation for BABA for bid solicitations and suggested contract language? Will EPA provide suggested language for Assistance Agreements?
 - A1.1: See Appendix 1, which includes suggested language for construction contracts which addresses the BABA requirements. In addition to the language suggested in Appendix 1, EPA also recommends that assistance recipients prepare contract bid solicitation documents with a statement for the consulting engineers and construction firms as follows: “By signing payment application and recommending payment, Contractor certifies they have reviewed documentation for all products and materials submitted for payment, and the certifications are sufficient to demonstrate compliance with Build America, Buy America Act requirements.” In most cases, the assistance recipient’s representatives assume the responsibility for their clients to conduct due diligence on compliance with applicable domestic preference requirements.

All Federal Financial infrastructure assistance agreements subject to BABA must have a clause requiring compliance with the requirements. See Appendix 2 for example assistance agreement language.

- Q1.2: Would federally-financed infrastructure projects outside of the United States need to comply with the BABA requirements?
 - A1.2: No. According to the OMB Guidance (M-22-11), a “project” is defined as “...any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States.” Therefore, the BABA requirements are not implicated for infrastructure projects occurring outside of the United States, such as projects funded through the United States-Mexico-Canada Agreement with infrastructure activities occurring in Mexico or Canada (that is, outside the United States).
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- Q1.3: If most of the project is BABA compliant, and a small portion is not, can an assistance recipient self-fund (i.e., paying with non-federal dollars) the non-compliant products?
 - A1.3: Any project that is funded in whole or in part with federal assistance must comply with the BABA requirements, unless the requirements are otherwise waived. All iron, steel, manufactured products, and construction materials used in a project must meet the BABA requirements unless waived. Absent a waiver, there is no “small portion” or product that does not need to satisfy the BABA requirements unless the requirements are waived (or specifically excluded as is the case for cement and cementitious materials; aggregates such as stone, sand, or gravel; aggregate binding agents or additives; or non-permanent products). An assistance recipient may request a waiver or inquire as to whether a broad waiver, such as a *de minimis* waiver, might apply.

- Q1.4: How do international trade agreements affect the implementation of the BABA requirements?
 - A1.4: The BABA requirements apply in a manner consistent with United States obligations under international trade agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to these trade agreements. In general, assistance recipients are not signatories to such agreements, so these trade agreements have no impact on BABA implementation. In the few instances where such an agreement applies to a municipality, that municipality is responsible for determining its applicability and requirements and communicating with the funding authority (such as EPA and/or a state) on the actions taken to comply with BABA.

SECTION 2: PRODUCT COVERAGE

- Q2.1: For products made of iron and steel, what is the difference between predominantly and primarily iron and steel?
 - A2.1: EPA considers the terms “predominantly” and “primarily” to be interchangeable, such that a product is considered predominantly (or primarily) iron and steel if it contains greater than 50 percent iron and steel by material cost.
- Q2.2: What is the definition of construction materials (with examples)?
 - A2.2: From OMB Guidance M-22-11: “construction materials” include an article, material, or supply (other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; aggregate binding agents or additives; or non-permanent products) that is or consists primarily of:
 - non-ferrous metals,
 - plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables), (including optic glass),
 - lumber, and
 - drywall.

For example, a plate of glass would be a construction material under BABA, but a framed window that incorporates the glass into a frame would be a manufactured product. Another common construction material for water infrastructure projects would be polyvinyl chloride (PVC) pipe and fittings. However, if PVC components are incorporated into a more complex product such as instrumentation and control equipment or a water treatment unit, those items would be manufactured products.

- Q2.3: What are manufactured products (with examples)?
 - A2.3: From OMB Guidance M-22-11: “...all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total

cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation...”

The manufactured products category would cover the majority of potential water infrastructure products, including complex products made up of a variety of material types and components. For water infrastructure projects, common manufactured products would include, but not be limited to, pumps, motors, blowers, aerators, generators, instrumentation and control systems, gauges, meters, measurement equipment, treatment equipment, dewatering equipment, actuators, and many other mechanical and electrical items.

- Q2.4: Which category will valves fall under for BABA? Will it differ from the American Iron and Steel (AIS) requirements?
 - A2.4: For programs that are subject to BABA and AIS (SRF, WIFIA, and Community Project Funding), projects using valves should classify them as iron and steel products under BABA as long as their material cost is made up of more than 50 percent iron and/or steel. Valves with 50 percent or less iron and/or steel by material cost would be considered manufactured products under the BABA requirements.

In accordance with OMB Guidance M-22-11, an article, material, or supply should be classified into only one of the three categories: iron and steel, manufactured products, or construction materials. Under the AIS requirements, all valves made primarily of iron and steel (that is, those with iron and/or steel material cost greater than 50 percent) must comply with the AIS requirements. For BABA, EPA interprets Section IV of OMB Guidance M-22-11 to mean that iron and steel products are those items that are primarily iron and steel, the same as for the AIS requirements.

- Q2.5: Does EPA have a list of products to be classified as “Iron and Steel” under BABA?
 - A2.5: Although this list is not comprehensive, the following products were classified as AIS products if made primarily (more than 50 percent) of iron and/or steel by materials cost (for programs subject to both AIS and BABA, this list would be equivalent for “iron and steel” items or products under either requirement):

Products likely made “primarily” of iron and steel to be classified as <u>Iron and Steel</u> under BABA		
Lined and Unlined Pipe	Lined and Unlined Fittings	Tanks
Flanges	Pipe Clamps and Restraints	Structural Steel
Valves	Hydrants	Pre-Cast, Iron/Steel Reinforced Concrete (of all types, regardless of iron/steel content percentage)
Manhole Covers and other Municipal Castings	Access Hatches	Ballast Screens
Iron or Steel Benches	Bollards	Cast Bases
Cast Iron Hinged Hatches	Cast Iron Riser Rings	Catch Basin Inlets
Cleanout/Monument Boxes	Construction Covers and Frames	Curb and Corner Guards

Products likely made "primarily" of iron and steel to be classified as <u>Iron and Steel</u> under BABA		
Curb Boxes	Curb Openings	Curb Stops
Detectable Warning Plates	Downspout Shoes	Drainage Grates
Drainage Grate Frames and Curb Inlets	Inlets	Junction Boxes
Lampposts	Manhole Rings and Frames	Manhole Risers
Meter Boxes	Service Boxes	Steel Hinged Hatches
Steel Riser Rings	Trash Receptacles	Tree Grates
Tree Guards	Trench Grates	Valve Boxes
Valve Box Covers and Risers	Access Ramps	Aeration Pipes and Fittings (separate from aeration/blowers)
Angles	Backflow Preventers/Double Check Valves	Baffle Curtains
Iron or Steel Bar	Bathroom Stalls	Beam Clamps
Cable Hanging Systems	Clarifier Tanks	Coiled Steel
Column Piping	Concrete Reinforcing Bar, Wire, and Fibers	Condensate Sediment Traps
Corrugated Pipe	Couplings	Decking
Digester Covers	Dome Structures	Door Hardware
Doors	Ductwork	Expansion Joints
Expansion Tanks (diaphragm, surge, and hydropneumatics)	Fasteners	Fencing and Fence Tubing
Fire Escapes	Flanged Pipe	Flap Gates
Framing	Gate Valves	Generic Hanging Brackets
Grating	Ground Testing Boxes	Ground Test Wells
Guardrails	HVAC Registers, Diffusers, and Grilles	Joists
Knife Gates	Ladders	Lifting Hooks, J-bar, Connectors within, and Anchors for Concrete
Lockers	Man Baskets and Material Platforms	Manhole Steps
Mud Valves	Municipal Casting Junctions	Non-mechanical (aka stationary) Louvers and Dampers
Overhead Rolling Doors/ Uplifting Doors (manual open, no motor)	Pipe Connectors	Pipe Hangers
Pipe Piling (any type of steel piling)	Pipe Spool (pipe, flanges, connectors, etc.)	Pipe Supports
Pitless Adaptors	Pre-fab Steel Buildings/Sheds (simple structure, unfurnished)	Pre-stressed Concrete Cylinder Pipe (PCCP)
Railings	Reduced Pressure Zone (RPZ) Valves	Roofing
Service Saddles	Sheet Piling	Sinks (not part of eyewash systems)
Solenoid Valves	Stairs	Static Mixers
Stationary Screens	Surface Drains	Tapping Sleeves
Telescoping Valves	Tipping Buckets	Trusses
Tubing	Valve Stem Extensions	Valve Stems (excluding handwheels and actuators)
Wall Panels	Wall Sleeves/Floor Sleeves	Welding Rods
Well Casing	Well Screens	Wire
Wire Cloth	Wire Rod	Wire Rope and Cables

Q2.6: Does EPA have a list of products that could be made “primarily” of iron and steel but would be classified as “manufactured products” under BABA?

A2.6: Although this list is not comprehensive, the following products would be considered “manufactured products” under the BABA requirements, even if the item might be composed primarily of iron and steel by materials cost (Note: These items are not subject to the AIS requirements.):

Products likely made “primarily” of iron and steel to be classified as <u>Manufactured Products</u> under BABA		
Actuator Superstructures/ Support Structures	Aeration Nozzles and Injectors	Aerators
Analytical Instrumentation	Analyzers (e.g., ozone, oxygen)	Automated Water Fill Stations
Blowers/Aeration Equipment	Boilers, Boiler Systems	Chemical Feed Systems (e.g., polymer, coagulant, treatment chemicals)
Chemical Injection Quills	Chemical Injectors	Clarifier Mechanisms/Arms
Compressors	Controls and Switches	Conveyors
Cranes	Desiccant Air Dryer Tanks	Dewatering Equipment
Dewatering Roll-offs	Disinfection Systems	Drives (e.g., variable frequency drives)
Electric/Pneumatic/Manual Accessories Used to Operate Valves (such as electric valve actuators)	Electrical Cabinetry and Housings (such as electrical boxes/enclosures)	Electrical Conduit
Electrical Junction Boxes	Electronic Door Locks	Elevator Systems (hydraulic, etc.)
Emergency Life Systems (including eyewash stations, emergency safety showers, fire extinguishers, fire suppression systems including sprinklers/piping/valves, first aid, etc.)	Exhaust Fans	Fall Protection Anchor Points
Fiberglass Tank w/Appurtenances	Filters (and appurtenances, including underdrains, backwash systems)	Flocculators
Fluidized Bed Incinerators	Galvanized Anodes/Cathodic Protection	Gear Reducers
Generators	Geothermal Systems	Grinders
Heat Exchangers	HVAC (excluding ductwork)	HVAC Dampers (if appurtenances to aerators/blowers)
HVAC Louvers (mechanical)	Intake and Exhaust Grates (if appurtenances to aerators/blowers)	Instrumentation
Laboratory Equipment	Ladder Fall Prevention Systems	Ladder Safety Posts
Lighting Fixtures	Lightning and Grounding Rods	Mechanical or Actuated Louvers/Dampers
Membrane Bioreactor Systems	Membrane Filtration Systems	Metal Office Furniture (fixed)
Meters (including flow, wholesale, water, and service connection)	Motorized Doors (unit)	Motorized Mixers
Motorized Screens (such as traveling screens)	Motors	Pelton Wheels
Pipeline Flash Reactors (similar to injectors)	Plate Settlers	Precast Concrete without Iron/Steel Reinforcement

Products likely made “primarily” of iron and steel to be classified as <u>Manufactured Products</u> under BABA		
Furnished Pre-fab Buildings (such as furnished with pumps, mechanics inside)	Presses (including belt presses)	Pressure Gauges
Pump Cans/Barrels and Strainers	Pumps	Mechanical Rakes
Safety Climb Cable	Sampling Stations (unless also act as hydrant)	Scrubbers
Sensors	Sequencing Batch Reactors (SBR)	Steel Shelving (fixed)
Slide and Sluice Gates	Spray Header Units	Steel Cabinets (fixed interior/furniture)
Supervisory Control and Data Acquisition (SCADA) Systems	Tracer Wire	Valve Manual Gears, Actuators, Handles
Voltage Transformer	Water Electrostatic Precipitators (WESP)	Water Heaters
Weir Gates		

- Q2.7: Is asphalt paving a covered product under BABA?
 - A2.7: No. EPA interprets Section 70917(c) of the IIIJA to exclude asphalt from BABA requirements. Asphalt paving is a type of concrete composed of an aggregate material mixed with a binder (bitumen). EPA considers asphalt concrete to be excluded by section 70917(c) due to its similarities with cement and cementitious materials.

SECTION 3: CO-FUNDING

- Q3.1: If projects are co-funded with funding mechanisms that don't require BABA, must the entire project comply with BABA?
 - A3.1: Yes. Any project that is funded in whole or in part with federal assistance must comply with the BABA requirements, unless the requirements are otherwise waived. A “project” consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all the contracts and assistance agreements awarded are closely related in purpose, time, and place. This precludes the intentional splitting of projects into separate and smaller contracts or assistance agreements to avoid BABA's applicability on some portions of a larger project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreements would carry separate requirements.

- Q3.2: How will project requirements be determined for co-funded projects subject to potentially different general applicability/programmatic waiver conditions (such as different adjustment period waivers)?
 - A3.2: OMB Guidance M-22-11 addresses cases with project co-funding from separate programs. EPA would apply the guidance's "cognizant" program determination to projects that are co-funded with different general applicability/programmatic waivers. For instance, if a project were co-funded between WIFIA and SRF and the majority of the Federal funding for the project is from WIFIA, then WIFIA would be the "cognizant" program for application and determination of waivers. In that case, any conditions from an applicable WIFIA waiver would apply.

SECTION 4: WAIVERS

- Q4.1: Who may apply for a waiver and how do you apply?
 - A4.1: Assistance recipients and their authorized representatives may apply for a project-specific waiver. EPA does not accept waiver requests from suppliers, distributors, or manufacturers unless the assistance recipient endorses and submits the request on its own behalf to the funding authority. In the case where multiple programs are providing federal funds to the project, the assistance recipient should submit the waiver request to the cognizant program, the one providing the greatest amount of federal funds for the project. For information on applying for cost waivers, see questions 4.4 and 4.5. For information on the SRF program roles and responsibilities, see question 7.6.

Project-specific waiver requests should generally include: (1) a brief summary of the project, (2) a description and explanation of the need for the waiver for the product(s) in question, (3) a brief summary of the due diligence conducted in search of domestic alternatives (which could include correspondence between assistance recipient and supplier/distributors), (4) the quantity and materials of the product(s) in question, (5) all engineering specifications and project design considerations relevant to the product(s) in question, (6) the approximate unit cost of items (both foreign and domestic) in addition to an estimated cost of the materials and overall project, (7) the date any products will be needed on site in order to avoid significant project schedule disruptions, and (8) any other pertinent information relevant to EPA's consideration of the waiver (e.g., if relevant for SRF projects: whether the project is designated as an equivalency project, the date the plans and specifications were submitted to the state, the date of construction initiation, expected date of project completion, any special considerations such as local zoning and building ordinances, seismic requirements, or noise or odor control requirements).

In the case of indirect federal assistance, such as the SRF programs, the state authority reviews and conveys the waiver request to EPA. States should submit waiver requests to the appropriate program waiver request inbox. For SRF projects, please use CWSRFWaiver@epa.gov or DWSRFWaiver@epa.gov.

- Q4.2: Can an assistance recipient request a waiver based on a specification written for a specific brand or model of product (that is, a specification that names a branded item or model)?
 - A4.2: In most cases, performance-based specifications are expected and required for the majority of infrastructure projects funded by EPA's financial assistance programs. In rare cases where "branded" or product-specific sourcing may be included in project specifications, it is suggested that the specifications include the item in question (that is, not simply a catalog page, but also materials of construction, sizing, quantities, and applicable engineering performance design characteristics for the project, etc.) in addition to the standard phrase "or equal." For the purposes of product alternative market research, EPA will evaluate the BABA requirements based on performance-based engineering specifications for the product(s) in question. If the project's specifications do not include performance-based specifications, or at least an "or equal" designation, EPA will base its research on an "or equal" designation using best professional judgment to the extent practicable.
- Q4.3: If a manufactured product is not readily available domestically, will EPA provide short-term "limited availability" product waivers?
 - A4.3: EPA will address the unavailability of domestic products through the waiver process, including potential national short-term waivers for specific products, if appropriate. To the extent practicable and with the intent to maximize domestic market and supply chain development, EPA intends to address issues of broad product unavailability with targeted, time-limited, and conditional waivers, as prescribed in OMB Guidance M-22-11. EPA will follow its robust and thorough product research processes (those put into place for the AIS requirements for the SRF and WIFIA programs and expanded for the new BABA requirements) to identify and determine those products for which proposed national/general applicability waivers may be appropriate.
- Q4.4: What information is needed when applying for a cost waiver under BABA?
 - A4.4: As part of the cost waiver request, the assistance recipient must demonstrate that implementation of the BABA requirements will increase the overall project cost more than 25 percent. Depending on the circumstances of the overall project cost increases, documentation to justify the cost waiver can vary but may include itemized cost estimates or bid tabulations comparing project costs with and without BABA implementation. Assistance recipients should begin assessing the potential cost impacts of the BABA requirements during the design phase of a project.
- Q4.5: Can administrative costs associated with tracking and verification of certifications be considered when determining if the cost of a project increases by 25 percent or more?
 - A4.5: Yes. Section 70914(b)(3) of the IIJA states that a waiver may be provided if the overall cost of the project increases by more than 25 percent due to the "inclusion of iron, steel, manufactured products, or construction materials produced in the United States." EPA interprets this to mean that the "inclusion" of the BABA-covered products could encompass

reasonable administrative costs associated with complying with the BABA requirements, such as staff, contractor, and technological resources to collect and track BABA compliance documentation.

- Q4.6: How can assistance recipients and construction contractors address product delivery delays?
 - A4.6: Assistance recipients should reasonably plan for material procurement to account for known potential supply chain issues or extended lead times and shall notify the funding authority well in advance of the issues so that prompt attention can be given to explore options. Where extended lead times for compliant products are impacting project schedules and may significantly impact construction progress, timely communication with the funding agency is important. For products that are unavailable within a reasonable timeframe to meet the objectives and schedule of a project, EPA may consider a non-availability waiver with adequate justification. An assistance recipient would need to apply for the waiver and contact its funding authority (such as EPA and/or a state) to initiate the waiver process.

SECTION 5: DOCUMENTING COMPLIANCE

- Q5.1: Who will be responsible for BABA enforcement?
 - A5.1: Responsibility for BABA implementation applies at all levels, from manufacturers to suppliers and distributors, construction contractors, assistance recipients, and funding authorities.

The manufacturers have responsibility to provide adequate and accurate documentation of the products manufactured. If suppliers and distributors are involved, they are responsible for passing along compliance documentation for products supplied to projects that are subject to the BABA requirements.

The assistance recipient and their representatives are primarily responsible for ensuring the documentation collected for products used on the project is sufficient to document compliance with the BABA requirements.

The funding authority is responsible for providing oversight and guidance as needed to ensure the proper implementation of the requirements. The Uniform Grants Guidance (UGG) (Title 2 of the Code of Federal Regulations (CFR) Part 200) applies to many Federal financial assistance agreements that will include BABA requirements. The general provisions of 2 CFR Part 200 determine the responsible party for the grant funding authority.

For information on SRF program roles and responsibilities, see question 7.6.

At all levels, where fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: <http://www.epa.gov/oig/hotline.htm>.

- Q5.2: When will the BABA requirements be assessed for compliance? Do assistance recipients need to have waivers for potential non-domestic products before assistance agreements are in place, at the time products are procured or products are incorporated into the project (i.e., used)?
 - A5.2: Compliance is assessed where the domestic product is used (or installed) at the project site. Proper compliance documentation, whether it is a BABA certification letter or a waiver, should accompany a product prior to its “use”, in accordance with Section 70914(a) of IIJA. This may occur prior to assistance agreements being in place but is not necessary. Additionally, communication of BABA requirements through appropriate Terms and Conditions in financial assistance agreements and in project solicitation and contract documents is key in ensuring all parties involved are informed of the requirements for the project before construction is underway.
- Q5.3: How can product compliance with the BABA requirements be demonstrated?
 - A5.3: Assistance recipients and their representatives should ensure that the products delivered to the construction site are accompanied by proper documentation that demonstrate compliance with the law and be made available to the funding authority upon request. The documentation may be received and maintained in hard copy, electronically, or could be embedded in construction management software. The use of a signed certification letter for the project is the most direct and effective form of compliance documentation for ensuring products used on site are BABA-compliant prior to their installation; however, other forms of documentation are also acceptable as long as collectively, the following can be demonstrated:
 - (1) Documentation linked to the project. For example, this can be in the form of the project name, project location, contract number, or project number.
 - (2) Documentation linked to the product used on the project. For example, description of product(s) (simple explanation sufficient to identify the product(s)), or an attached (or electronic link to) purchase order, invoice, or bill of lading.
 - (3) Documentation includes statement attesting that the products supplied to the assistance recipient are compliant with BABA requirement. Reference to the Infrastructure Investment and Jobs Act (“IIJA”) or the Bipartisan Infrastructure Law (BIL) are also acceptable. For iron and steel items under BABA, references to the American Iron and Steel (AIS) requirements are also acceptable and reciprocal with BABA for such items.
 - (4) Documentation that manufacturing occurred in the United States, which could include, for example, the location(s) of manufacturing for each manufacturing step that is being certified. It is acceptable for manufactured products to note a single point of manufacturing, documenting that the final point of manufacturing is in the United States. Note that each BABA category may require different determinations for compliance.
 - (5) Signature of company representative (on company letterhead and signature can be electronic). The signatory of the certifying statement affirms their knowledge of the manufacturing processes for the referenced product(s) and attests that the product meets the BABA requirements.

In addition to compliance documentation, assistance recipients or their representatives should also conduct a visual inspection of the product when it arrives to the project site, especially for iron and steel products which are often stamped with the country of origin. (Note: A country of origin stamp alone is not sufficient verification of compliance with BABA and assistance receipts should not rely on it to ensure compliance.)

EPA may develop alternative procedures for demonstrating compliance. Additional project- or program-specific instructions may be developed on a case-by-case basis in order to meet individual circumstances.

- Q5.4: Will EPA provide a form or template for tracking and documenting compliance?
 - A5.4: EPA does not require a specified format for tracking or documenting compliance. Assistance recipients are free to develop any system (from simple to complex software) for tracking items used on the project and the accompanying compliance documentation, e.g., certification letters, applicable waivers, if it helps with implementation and compliance. Elements that may help with keeping track of compliance may include: product description, quantity required/used, product category (i.e., iron and steel, manufactured product, or construction material), status of obtaining certification letter, product cost, and whether the item might qualify as *de minimis*, or qualify under another applicable waiver.
- Q5.5: If a manufacturer claims to comply with the Buy American Act, does it also comply with BABA?
 - A5.5: No. With the exception of the AIS requirements – which EPA interprets to be equivalent to the “iron and steel” requirements under BABA – EPA does not have an interpretation about the comparability of other domestic preference requirements relative to BABA. Any products that are to be certified as compliant with BABA should include a specific reference to the BABA requirements and appropriate attestation from a responsible manufacturing company official. See Question 5.3 for EPA’s recommendations for BABA certification letters.
- Q5.6: How will assistance recipients manage certification letters for hundreds, possibly thousands of products?
 - A5.6: EPA recognizes that the new BABA requirements will cover most products used in typical water and wastewater infrastructure projects, and that the number of items which may require certification at large and/or complex projects may reach several hundred. EPA is concerned about the potential administrative burden that this would place on assistance recipients. EPA recommends that projects with a high number of potentially covered products meet with their funding authority about potential compliance strategies to minimize burden and streamline compliance activity. Assistance recipients should prepare contract bid solicitation documents with a statement for the consulting engineers and construction firms as follows: “By signing payment application and recommending payment, Contractor certifies they have reviewed documentation for all products and materials submitted for payment, and the documentation is sufficient to demonstrate compliance with Build America,

Buy America Act requirements.” In most cases, the assistance recipient’s representatives may assume the responsibility for their clients to conduct due diligence on compliance with applicable domestic preference requirements.

- Q5.7: Who is responsible for documenting the 55 percent content requirement for manufactured products under BABA? What if the final manufacturer cannot trace or verify domestic origin for all components?
 - A5.7: The manufacturer who signs a certification letter is responsible for documenting compliance with any of the three categories of products (iron and steel, manufactured products, or construction materials). For manufactured products, BABA requires that greater than 55 percent of the total cost of all components of the manufactured product be from domestic sources. EPA recommends that the certification letter for manufactured products document whether the item passes the content test in the final product along with a statement attesting to compliance with the BABA requirements for manufactured products.
- Q5.8: How do final product fabricators document compliance when the final step of manufacturing may be simply assembling components?
 - A5.8: It is acceptable, in many cases, especially for highly complex manufactured products that utilize many sub-components, for the final point of assembly to certify without using a “step certification” process. Multiple certifications (i.e., step certifications) or a singular certification can be used for a product, as long as the certifying official is willing to attest to the product’s compliance with BABA requirements at all stages of manufacturing.
- Q5.9: Will Material Test Reports be acceptable in lieu of a BABA certification for iron and steel?
 - A5.9: Material Test Reports (MTRs, commonly referred to as “Mill Certifications” or “Mill Certs”) provide the chemical composition of steel and iron from a mill or foundry. If an MTR accompanies the delivery of steel or iron to a project site with an invoice or bill of lading, EPA will consider it sufficient to demonstrate compliance (equivalent to a certification letter) as long as the MTR includes a manufacturer representative’s signature in addition to the location (city and state) of the mill/foundry. It is common for MTRs to be the first letter in a “step certification” if the product is further fabricated or painted, etc., by another manufacturer.
- Q5.10: Can a manufacturer use a fillable certification letter for products?
 - A5.10: EPA recommends that certifications be signed by representatives of the manufacturing entity. EPA does not oppose manufacturers using forms to internally develop letters within their company, thereby providing signed, non-manipulable certification letters to suppliers, distributors, and/or assistance recipients. A fillable form that can be changed by someone outside of the manufacturer after signature does not demonstrate compliance and may create compliance concerns for the manufacturer or assistance recipient.

- Q5.11: Are product certifications from suppliers and distributors allowed?
 - A5.11: EPA recommends that representatives of product manufacturers certify compliance and discourages suppliers and distributors from creating certification letters. EPA does not rule out the possibility that a third-party certification process, such as a certification by a distributor, may be viable. However, EPA is currently not aware of a system or proposed system that meets the EPA's recommendations for documentation of product certification.
- Q5.12: How long should assistance recipients keep compliance documentation?
 - A5.12: Assistance recipients should apply recordkeeping requirements for the project according to the procedures dictated by the funding authority. For most EPA grant programs, this is prescribed in the UGG at 2 CFR 200.334-200.338; e.g., the SRF programs require a minimum of three years. Other funding programs may require longer documentation retention periods.

SECTION 6: PROGRAMS WITH AMERICAN IRON AND STEEL REQUIREMENTS

- Q6.1: Does BABA supersede the American Iron and Steel (AIS) Requirements?
 - A6.1: The BABA requirements for items considered "iron and steel" are equivalent to those for covered iron and steel products under the AIS requirements in the Clean Water Act and the Safe Drinking Water Act. These requirements apply to the CWSRF, DWSRF, WIFIA, and Water infrastructure Community Grants. BABA includes a "Savings Provision" (Section 70917(b)) that states that BABA does not affect existing domestic content procurement preferences for infrastructure projects funded by Federal financial assistance programs that meet the requirements of section 70914. EPA views the AIS requirements as meeting the "iron and steel" product requirements of BABA Section 70914, as they both include the key requirement that items made of iron and steel be wholly manufactured in the United States from the point of melting and/or pouring the iron or steel components through final manufacturing step. Because of the "Savings Provision" of Section 70917, the AIS requirements satisfy the "iron and steel" requirements of BABA. For the programs that have AIS requirements, EPA intends to implement BABA requirements the same way for iron and steel items as it has done for AIS products.
- Q6.2: For iron and steel products, does a manufacturer need to demonstrate compliance from initial melting through the finished product?
 - A6.2: For iron and steel products, the BABA requirements are the same as the existing AIS requirements, in that all of the iron and steel in a covered product (that is, the product is comprised of more than 50 percent iron and steel by material cost) must be melted and poured in the United States and all subsequent manufacturing processes (such as grinding, rolling, bending, reheating, and casting) must occur in the United States.

Q6.3: Will EPA apply the same manufacturing standards for BABA iron and steel products as for the American Iron and Steel (AIS) requirements?

- A6.3: Yes. For AIS, EPA did not require raw materials used in the production of steel or iron to be domestically sourced. For BABA, EPA interprets the requirements to be the same. Hence, like AIS, raw materials in the production of iron and steel subject to BABA requirements would not need to be domestically sourced. The key step for both AIS and BABA domestic iron and/or steel production is the melting/pouring (that is, the location of the furnace), which must be in the United States.

- Q6.4: Will the certification process be similar to the process established for the American Iron and Steel requirements?

- A6.4: EPA expects the certification process for the BABA requirements to be very similar to that established for the AIS requirements. For iron and steel products, the process should remain the same for AIS and BABA. EPA recommends for manufactured products and for construction materials that certification letters include direct reference to the product/material content requirements under BABA, in addition to an affirmative statement verifying that the product meets the BABA requirements.

- Q6.5: Will duplicate certification letters be required for AIS and BABA for iron/steel products?

- A6.5: No. Compliance with BABA requirements will be sufficient to demonstrate compliance with AIS requirements for iron and steel products. If a project is subject to BABA, the only demonstration of compliance necessary is with the BABA requirements, of which the iron and steel requirements are equivalent to those of the AIS statutory requirements: the iron or steel in a product made primarily or predominantly of iron and steel (comprising more than 50 percent iron and steel by material cost) must be melted and/or poured in the United States and all subsequent manufacturing processes must occur in the United States.

SECTION 7: PROGRAM-SPECIFIC ISSUES

- Q7.1.: How do the BABA requirements apply to Community Grants?

- A7.1: The Community Project Funding/Congressionally Directed Spending grants for the construction of drinking water, wastewater, and stormwater infrastructure and for water quality protection are subject to the requirements specified in the explanatory statement accompanying the Consolidated Appropriations Act (Explanatory Statement for Division G of P.L. 117-13, the Consolidated Appropriations Act of 2022). The explanatory statement asserts: "Applicable Federal requirements that would apply to a Clean Water State Revolving Fund or Drinking Water State Revolving Fund project grant recipient shall apply to a grantee receiving a CPF grant under this section." Therefore, the federally funded Community Project Funding/Congressionally Directed Spending grants are subject to the same requirements that apply to CWSRF or DWSRF projects, including BABA and AIS requirements. See also A1.2.

- Q7.2: Should SRF projects covered by the BABA SRF Projects Design Planning Adjustment Period Waiver follow the same procedures for demonstrating compliance as outlined for American Iron and Steel requirements?
 - A7.2: Yes. The SRF Design Planning Adjustment Period waiver does not waive the iron and steel requirements under BABA. The SRF programs have existing domestic preference requirements for SRF projects under CWA Section 608 and SDWA Section 1452(a)(4) (AIS requirements) to use iron and steel products that are produced in the United States. Sections 70917(a) and (b) of BIL explain the application of BABA to existing domestic preference requirements. Specifically, the savings provision in Section 70917(b) states that existing domestic preference requirements that meet BABA requirements are not affected by BABA. The statutory AIS requirements were existing at the time BABA became law and satisfy the BABA iron and steel requirements. Therefore, the statutory AIS requirements that have previously applied to SRF-funded projects will continue to do so, and compliance with AIS requirements will satisfy the BABA iron and steel requirements. Demonstration of compliance for iron and steel products will follow the AIS implementation policies for projects subject to the waiver.
- Q7.3: For SRF programs, is BABA considered a federal cross-cutting authority? (i.e., do “equivalency” rules apply?)
 - A7.3: Yes, BABA is considered a federal cross-cutting requirement that applies to SRF assistance equivalent to the federal capitalization grant (i.e., “equivalency” projects). EPA’s SRF regulations at 40 CFR 35.3145 and 35.3575 require states and recipients of SRF funds equivalent to the amount of the federal capitalization grant to comply with federal cross-cutting requirements. Section 70914 of the IIJA, which states when a Buy America preference applies, explains that “none of the funds made available for a Federal financial assistance program for infrastructure... may be obligated for a project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.” Therefore, BABA only applies to projects funded in an amount equivalent to the federal capitalization grant and not to those projects receiving funds in excess of the capitalization grant (i.e., “non-equivalency” projects). (Note: The AIS requirements continue to apply for all SRF projects, including non-equivalency projects, and all WIFIA and Community Grant projects, because equivalency does not apply.)
- Q7.4: Do the BABA requirements apply to Drinking Water State Revolving Fund set-asides?
 - A7.4: Due to requirements related to the deposit of funds in the DWSRF program, almost all of the funds used to conduct set-aside activities are Federal dollars. Therefore, Federal cross-cutting requirements must be applied to all set-aside activities. However, in the case of most set-aside activities, the cross-cutting requirements will not be implicated because of the nature of the activities conducted under the set-asides. Because the BABA requirements only apply to infrastructure, and infrastructure typically is not an eligible set-aside expenditure (with one potential exception being loans for incentive-based source water protection

measures under the Local Assistance and Other State Programs Set-Aside), the BABA requirements will not apply to most set-aside activities.

- Q7.5: What if an SRF project is refinanced using Federal financial assistance on or after May 14, 2022?
 - A7.5: If an SRF project began construction, financed from another funding source, prior to May 14, 2022, but is refinanced through an assistance agreement executed on or after that date, BABA requirements will apply to all construction that occurs on or after May 14, 2022, through completion of construction, unless a waiver applies. There is no retroactive application of the BABA requirements where a refinancing occurs for an SRF project that has completed construction prior to May 14, 2022. (Note: If SRF funding is used for the refinancing, the AIS requirements may still apply depending on the timing of construction.)
- Q7.6: What are the roles and responsibilities for SRF programs for BABA implementation?
 - A7.6: Implementation of the BABA requirements for the State Revolving Fund programs will continue the roles and responsibilities from the successful AIS implementation process.

As with AIS, it is both the assistance recipient's and the state's responsibility to ensure compliance with the BABA requirements. The state is the recipient of a federal capitalization grant and must comply with all grant conditions, including a condition requiring adherence to BABA requirements.

Consequently, states are strongly advised to conduct site visits of projects during construction and review documentation demonstrating the assistance recipient's proof of compliance. In EPA's experience, most states conduct periodic site visits and arrange timely meetings with funded projects. Observed best practices typically include a meeting early in the process (sometimes before bid and usually prior to commencing construction) and at least one project site visit during the construction process. Assistance recipients must maintain documentation of compliance with the BABA requirements, as explained in question 5.3. The documents must be kept by the assistance recipient and should be reviewed by the state during project reviews.

The state's role in the waiver process is to review any waiver requests submitted to the state to ensure that all necessary information has been provided by the assistance recipient prior to forwarding the request to EPA. If a state finds the request lacking, the state should work with the assistance recipient to help obtain complete information. Question 4.1 explains the information needed by EPA to expediently review a waiver request.

In order to implement the BABA requirements, EPA has developed an approach for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow states, on behalf of the assistance recipients, to apply for waivers of the BABA requirements directly to EPA Headquarters. Only waiver requests received and/or endorsed from states will be considered. Pursuant to BABA, EPA has the responsibility to make findings as to the issuance of waivers to the BABA requirements.

Step-by-step SRF Waiver Process

The waiver process begins with the assistance recipient. To fulfill the BABA requirements, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American-made iron and steel, manufactured goods, and construction materials. It is essential that the assistance recipient include the BABA terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 2 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three statutory conditions is demonstrated to EPA and approved.

To apply for a project-specific waiver, the assistance recipient should email the request in the form of a Word document (.doc) or editable PDF (.pdf) to the funding program. It is strongly recommended that each state identify a person or persons for BABA communications. The state designee(s) will review the application for the waiver and determine whether the necessary information has been included (Note: More information may be provided in the future regarding what information is required to be included in waiver requests). Once the waiver application is complete, the designee will forward the application to CWSRFWaiver@epa.gov or DWSRFWaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the BABA requirements and ensuring sufficient information was provided, EPA will publish the request on its website for 15 days and receive public comment. EPA will then determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the state designee whether a waiver request has been approved or not approved as soon as such a decision has been made. Granting such a waiver is a four-step process:

1. Research – After receiving an application for a waiver, EPA will perform market research to determine whether the iron, steel, manufactured goods, or construction materials are available domestically.

2. Posting – After research, if no domestic product has been identified, EPA is required to publish the application and all material submitted with the application on EPA's website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at:

<https://www.epa.gov/cwsrf/build-america-buy-america-baba-waivers-open-public-comment>

3. Evaluation – After receiving an application for waiver of the BABA requirements, EPA will determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver to determine whether or not to grant the waiver.

3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program and post the signed waiver on the Agency's website. The assistance recipient should keep a copy of the signed waiver in its project files.

(Note: Additional steps may be required in the future regarding the waiver process depending on additional guidance from OMB)

APPENDIX 1

Example Build America, Buy America (BABA) Act Construction Contract Language

ALL CONSTRUCTION CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE BABA REQUIREMENTS. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN A PROJECT'S CONSTRUCTION CONTRACT. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the _____ ("Owner") and the _____ (the "Funding Authority") that it understands the goods and services under this Agreement are being funded with federal monies and have statutory requirements commonly known as "Build America, Buy America," that requires all of the iron and steel, manufactured products, and construction materials used in the project to be produced in the United States ("Build America, Buy America Requirements") including iron and steel, manufactured products, and construction materials provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Owner and Funding Authority (a) the Contractor has reviewed and understands the Build America, Buy America Requirements, (b) all of the iron and steel, manufactured products, and construction materials used in the project will be and/or have been produced in the United States in a manner that complies with the Build America, Buy America Requirements, unless a waiver of the requirements is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the Build America, Buy America Requirements, as may be requested by the Owner or the Funding Authority. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Owner or Funding Authority to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Owner or Funding Authority resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the Funding Authority or any damages owed to the Funding Authority by the Owner). If the Contractor has no direct contractual privity with the Funding Authority, as a lender or awardee to the Owner for the funding of its project, the Owner and the Contractor agree that the Funding Authority is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the Funding Authority.

APPENDIX 2

Example Build America, Buy America (BABA) Act Assistance Agreement Language

ALL FEDERAL FINANCIAL INFRASTRUCTURE ASSISTANCE AGREEMENTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE BABA REQUIREMENTS. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN AN ASSISTANCE AGREEMENT (E.G., SRF LOAN AGREEMENT). EPA MAKES NO CLAIMS REGARDING THE LEGAL SUFFICIENCY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the assistance received (including those imposed by the Infrastructure Investment and Jobs Act ("IIJA"), Public Law No. 117-58) which the Participant understands includes, but is not limited to, the following requirements: that all of the iron and steel, manufactured products, and construction materials used in the Project are to be produced in the United States ("Build America, Buy America Requirements") unless (i) the Participant has requested and obtained a waiver from the cognizant Agency^[1] pertaining to the Project or the Project is otherwise covered by a general applicability waiver; or (ii) all of the contributing Agencies have otherwise advised the Participant in writing that the Build America, Buy America Requirements are not applicable to the Project.

Comply with all record keeping and reporting requirements under all applicable legal authorities, including any reports required by the funding authority (such as EPA and/or a state), such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the applicable legal requirements and this Agreement may result in a default hereunder that results in a repayment of the assistance agreement in advance of the maturity of the Bonds, termination and/or repayment of grants, cooperative agreements, direct assistance or other types of financial assistance, and/or other remedial actions.

^[1] From OMB Guidance M-22-11: To avoid a need for duplicative waiver requests from entities that receive funding for one infrastructure project through multiple Federal agencies, the Federal agency contributing the greatest amount of Federal funds for the project should be considered the "Cognizant Agency for Made in America" and should take responsibility for coordinating with the other Federal awarding agencies. Such coordination will provide uniform waiver criteria and adjudication processes, minimize duplicative efforts among Federal agencies, and reduce burdens on recipients. The Cognizant Agency for Made in America shall be responsible for consulting with the other Federal awarding agencies, publicizing the proposed joint waiver, and submitting the proposed joint waiver for review to MIAO.



APPENDIX I

AMERICAN IRON AND STEEL (AIS) REQUIREMENTS

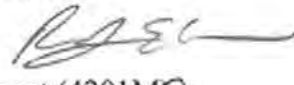
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

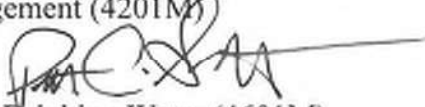
MAR 20 2014

OFFICE OF WATER

MEMORANDUM

SUBJECT: Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014

FROM: *for* Andrew D. Sawyers, Director 
Office of Wastewater Management (4201M)

Peter C. Grevatt, Director 
Office of Ground Water and Drinking Water (4601M)

TO: Water Management Division Directors
Regions I - X

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an "American Iron and Steel (AIS)" requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014 (enactment of the Act), through the end of Federal Fiscal Year 2014.

Section 436 also sets forth certain circumstances under which EPA may waive the AIS requirement. Furthermore, the Act specifically exempts projects where engineering plans and specifications were approved by a State agency prior to January 17, 2014.

The approach described below explains how EPA will implement the AIS requirement. The first section is in the form of questions and answers that address the types of projects that must comply with the AIS requirement, the types of products covered by the AIS requirement, and compliance. The second section is a step-by-step process for requesting waivers and the circumstances under which waivers may be granted.

Implementation

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out

the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following questions and answers provide guidance for implementing and complying with the AIS requirements:

Project Coverage

1) What classes of projects are covered by the AIS requirement?

All treatment works projects funded by a CWSRF assistance agreement, and all public water system projects funded by a DWSRF assistance agreement, from the date of enactment through the end of Federal Fiscal Year 2014, are covered. The AIS requirements apply to the entirety of the project, no matter when construction begins or ends. Additionally, the AIS requirements apply to all parts of the project, no matter the source of funding.

2) Does the AIS requirement apply to nonpoint source projects or national estuary projects?

No. Congress did not include an AIS requirement for nonpoint source and national estuary projects unless the project can also be classified as a 'treatment works' as defined by section 212 of the Clean Water Act.

3) Are any projects for the construction, alteration, maintenance, or repair of a public water system or treatment works excluded from the AIS requirement?

Any project, whether a treatment works project or a public water system project, for which engineering plans and specifications were approved by the responsible state agency prior to January 17, 2014, is excluded from the AIS requirements.

4) What if the project does not have approved engineering plans and specifications but has signed an assistance agreement with a CWSRF or DWSRF program prior to January 17, 2014?

The AIS requirements do not apply to any project for which an assistance agreement was signed prior to January 17, 2014.

5) What if the project does not have approved engineering plans and specifications, but bids were advertised prior to January 17, 2014 and an assistance agreement was signed after January 17, 2014?

If the project does not require approved engineering plans and specifications, the bid advertisement date will count in lieu of the approval date for purposes of the exemption in section 436(f).

6) What if the assistance agreement that was signed prior to January 17, 2014, only funded a part of the overall project, where the remainder of the project will be funded later with another SRF loan?

If the original assistance agreement funded any construction of the project, the date of the original assistance agreement counts for purposes of the exemption. If the original assistance agreement was only for planning and design, the date of that assistance agreement will count for purposes of the exemption only if there is a written commitment or expectation on the part of the assistance recipient to fund the remainder of the project with SRF funds.

7) What if the assistance agreement that was signed prior to January 17, 2014, funded the first phase of a multi-phase project, where the remaining phases will be funded by SRF assistance in the future?

In such a case, the phases of the project will be considered a single project if all construction necessary to complete the building or work, regardless of the number of contracts or assistance agreements involved, are closely related in purpose, time and place. However, there are many situations in which major construction activities are clearly undertaken in phases that are distinct in purpose, time, or place. In the case of distinct phases, projects with engineering plans and specifications approval or assistance agreements signed prior to January 17, 2014 would be excluded from AIS requirements while those approved/signed on January 17, 2014, or later would be covered by the AIS requirements.

8) What if a project has split funding from a non-SRF source?

Many States intend to fund projects with “split” funding, from the SRF program and from State or other programs. Based on the Act language in section 436, which requires that American iron and steel products be used in any project for the construction, alteration, maintenance, or repair of a public water system or treatment works receiving SRF funding between and including January 17, 2014 and September 30, 2014, any project that is funded in whole or in part with such funds must comply with the AIS requirement. A “project” consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all contracts and assistance agreements awarded are closely related in purpose, time and place. This precludes the intentional splitting of SRF projects into separate and smaller contracts or assistance agreements to avoid AIS coverage on some portion of a larger

project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreement for SRF and State or other funding would carry separate requirements.

9) What about refinancing?

If a project began construction, financed from a non-SRF source, prior to January 17, 2014, but is refinanced through an SRF assistance agreement executed on or after January 17, 2014 and prior to October 1, 2014, AIS requirements will apply to all construction that occurs on or after January 17, 2014, through completion of construction, unless, as is likely, engineering plans and specifications were approved by a responsible state agency prior to January 17, 2014. There is no retroactive application of the AIS requirements where a refinancing occurs for a project that has completed construction prior to January 17, 2014.

10) Do the AIS requirements apply to any other EPA programs, besides the SRF program, such as the Tribal Set-aside grants or grants to the Territories and DC?

No, the AIS requirement only applies to funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12)

Covered Iron and Steel Products

11) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings (defined in more detail below);
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel (defined in more detail below);
- Reinforced precast concrete; and
- Construction materials (defined in more detail below).

12) What does the term ‘primarily iron or steel’ mean?

‘Primarily iron or steel’ places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does ‘produced in the United States’ mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the

material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of ‘municipal castings’?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel. Examples of municipal castings are:

- Access Hatches;
- Ballast Screen;
- Benches (Iron or Steel);
- Bollards;
- Cast Bases;
- Cast Iron Hinged Hatches, Square and Rectangular;
- Cast Iron Riser Rings;
- Catch Basin Inlet;
- Cleanout/Monument Boxes;
- Construction Covers and Frames;
- Curb and Corner Guards;
- Curb Openings;
- Detectable Warning Plates;
- Downspout Shoes (Boot, Inlet);
- Drainage Grates, Frames and Curb Inlets;
- Inlets;
- Junction Boxes;
- Lampposts;
- Manhole Covers, Rings and Frames, Risers;

Meter Boxes;
Service Boxes;
Steel Hinged Hatches, Square and Rectangular;
Steel Riser Rings;
Trash receptacles;
Tree Grates;
Tree Guards;
Trench Grates; and
Valve Boxes, Covers and Risers.

20) What is ‘structural steel’?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zebs. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a ‘construction material’ for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered “structural steel”. This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

22) What is not considered a ‘construction material’ for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system.

The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and

data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Compliance

25) How should an assistance recipient document compliance with the AIS requirement?

In order to ensure compliance with the AIS requirement, specific AIS contract language must be included in each contract, starting with the assistance agreement, all the way down to the purchase agreements. Sample language for assistance agreements and contracts can be found in Appendix 3 and 4.

EPA recommends the use of a step certification process, similar to one used by the Federal Highway Administration. The step certification process is a method to ensure that producers adhere to the AIS requirement and assistance recipients can verify that products comply with the AIS requirement. The process also establishes accountability and better enables States to take enforcement actions against violators.

Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. A step certification is a process under which each handler (supplier, fabricator, manufacturer,

processor, etc) of the iron and steel products certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin. A certification can be quite simple. Typically, it includes the name of the manufacturer, the location of the manufacturing facility where the product or process took place (not its headquarters), a description of the product or item being delivered, and a signature by a manufacturer's responsible party. Attached, as Appendix 5, are sample certifications. These certifications should be collected and maintained by assistance recipients.

Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US. While this type of certification may be acceptable, it may not provide the same degree of assurance. Additional documentation may be needed if the certification is lacking important information. Step certification is the best practice.

26) How should a State ensure assistance recipients are complying with the AIS requirement?

In order to ensure compliance with the AIS requirement, States SRF programs must include specific AIS contract language in the assistance agreement. Sample language for assistance agreements can be found in Appendix 3.

States should also, as a best practice, conduct site visits of projects during construction and review documentation demonstrating proof of compliance which the assistance recipient has gathered.

27) What happens if a State or EPA finds a non-compliant iron and/or steel product permanently incorporated in the project?

If a potentially non-compliant product is identified, the State should notify the assistance recipient of the apparent unauthorized use of the non-domestic component, including a proposed corrective action, and should be given the opportunity to reply. If unauthorized use is confirmed, the State can take one or more of the following actions: request a waiver where appropriate; require the removal of the non-domestic item; or withhold payment for all or part of the project. Only EPA can issue waivers to authorize the use of a non-domestic item. EPA may use remedies available to it under the Clean Water Act, the Safe Drinking Water Act, and 40 CFR part 31 grant regulations, in the event of a violation of a grant term and condition.

It is recommended that the State work collaboratively with EPA to determine the appropriate corrective action, especially in cases where the State is the one who identifies the item in noncompliance or there is a disagreement with the assistance recipient.

If fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-

888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: <https://oig.hhs.gov/fraud/report-fraud/>

28) How do international trade agreements affect the implementation of the AIS requirements?

The AIS provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to such agreements. In general, SRF assistance recipients are not signatories to such agreements, so these agreements have no impact on this AIS provision. In the few instances where such an agreement applies to a municipality, that municipality is under the obligation to determine its applicability and requirements and document the actions taken to comply for the State.

Waiver Process

The statute permits EPA to issue waivers for a case or category of cases where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent.

In order to implement the AIS requirements, EPA has developed an approach to allow for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow States, on behalf of the assistance recipients, to apply for waivers of the AIS requirement directly to EPA Headquarters. Only waiver requests received from states will be considered. Pursuant to the Act, EPA has the responsibility to make findings as to the issuance of waivers to the AIS requirements.

Definitions

The following terms are critical to the interpretation and implementation of the AIS requirements and apply to the process described in this memorandum:

Reasonably Available Quantity: The quantity of iron or steel products is available or will be available at the time needed and place needed, and in the proper form or specification as specified in the project plans and design.

Satisfactory Quality: The quality of iron or steel products, as specified in the project plans and designs.

Assistance Recipient: A borrower or grantee that receives funding from a State CWSRF or DWSRF program.

Step-By-Step Waiver Process

Application by Assistance Recipient

Each local entity that receives SRF water infrastructure financial assistance is required by section 436 of the Act to use American made iron and steel products in the construction of its project. However, the recipient may request a waiver. Until a waiver is granted by EPA, the AIS requirement stands, except as noted above with respect to municipalities covered by international agreements.

The waiver process begins with the SRF assistance recipient. In order to fulfill the AIS requirement, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American made iron and steel products. It is essential that the assistance recipient include the AIS terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 3 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:

1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Proper and sufficient documentation must be provided by the assistance recipient. A checklist detailing the types of information required for a waiver to be processed is attached as Appendix 1.

Additionally, it is strongly encouraged that assistance recipients hold pre-bid conferences with potential bidders. A pre-bid conference can help to identify iron and steel products needed to complete the project as described in the plans and specifications that may not be available from domestic sources. It may also identify the need to seek a waiver prior to bid, and can help inform the recipient on compliance options.

In order to apply for a project waiver, the assistance recipient should email the request in the form of a Word document (.doc) to the State SRF program. It is strongly recommended that the State designate a single person for all AIS communications. The State SRF designee will review the application for the waiver and determine whether the necessary information has been included. Once the waiver application is complete, the State designee will forward the application to either of two email addresses. For CWSRF waiver requests, please send the application to: cwsrfwaiver@epa.gov. For DWSRF waiver requests, please send the application to: dwsrfwaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the AIS requirements, EPA Headquarters will publish the request on its website for 15 days and receive informal comment. EPA Headquarters will then use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the State designee that a waiver request has been approved or denied as soon as such a decision has been made. Granting such a waiver is a three-step process:

1. Posting – After receiving an application for a waiver, EPA is required to publish the application and all material submitted with the application on EPA's website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: http://water.epa.gov/grants_funding/aisrequirement.cfm
2. Evaluation – After receiving an application for waiver of the AIS requirements, EPA Headquarters will use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.
3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program, and post the signed waiver on our website. The assistance recipient should keep a copy of the signed waiver in its project files.

Public Interest Waivers

EPA has the authority to issue public interest waivers. Evaluation of a public interest waiver request may be more complicated than that of other waiver requests so they may take more time than other waiver requests for a decision to be made. An example of a public interest waiver that might be issued could be for a community that has standardized on a particular type or manufacturer of a valve because of its performance to meet their specifications. Switching to an alternative valve may require staff to be trained on the new equipment and additional spare parts would need to be purchased and stocked, existing valves may need to be unnecessarily replaced, and portions of the system may need to be redesigned. Therefore, requiring the community to install an alternative valve would be inconsistent with public interest.

EPA also has the authority to issue a public interest waiver that covers categories of products that might apply to all projects.

EPA reserves the right to issue national waivers that may apply to particular classes of assistance recipients, particular classes of projects, or particular categories of iron or steel products. EPA may develop national or (US geographic) regional categorical waivers through the identification of similar circumstances in the detailed justifications presented to EPA in a waiver request or requests. EPA may issue a national waiver based on policy decisions regarding the public's interest or a determination that a particular item is not produced domestically in reasonably available quantities or of a sufficient quality. In such cases, EPA may determine it is necessary to issue a national waiver.

If you have any questions concerning the contents of this memorandum, you may contact us, or have your staff contact Jordan Dorfman, Attorney-Advisor, State Revolving Fund Branch, Municipal Support Division, at dorfman.jordan@epa.gov or (202) 564-0614 or Kiri Anderer, Environmental Engineer, Infrastructure Branch, Drinking Water Protection Division, at anderer.kirsten@epa.gov or (202) 564-3134.

Attachments

Attachment 1: Information Checklist for Waiver Request

The purpose of this checklist is to help ensure that all appropriate and necessary information is submitted to EPA. EPA recommends that States review this checklist carefully and provide all appropriate information to EPA. This checklist is for informational purposes only and does not need to be included as part of a waiver application.

Items	✓	Notes
<p>General</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Description of the foreign and domestic construction materials — Unit of measure — Quantity — Price — Time of delivery or availability — Location of the construction project — Name and address of the proposed supplier — A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor 	✓	
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers 		
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: <ul style="list-style-type: none"> — Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials — Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects? 		

Attachment 2: HQ Review Checklist for Waiver Request

Instructions: To be completed by EPA. Review all waiver requests using the questions in the checklist, and mark the appropriate box as Yes, No or N/A. Marks that fall inside the shaded boxes may be grounds for denying the waiver. If none of your review markings fall into a shaded box, the waiver is eligible for approval if it indicates that one or more of the following conditions applies to the domestic product for which the waiver is sought:

1. The iron and/or steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
2. The inclusion of iron and/or steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Review Items		Yes	No	N/A	Comments
Cost Waiver Requests					
<ul style="list-style-type: none"> Does the waiver request include the following information? <ul style="list-style-type: none"> Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products Relevant excerpts from the bid documents used by the contractors to complete the comparison A sufficient number of bid documents or pricing information from domestic sources to constitute a reasonable survey of the market Does the Total Domestic Project exceed the Total Foreign Project Cost by more than 25%? 					
Availability Waiver Requests					
<ul style="list-style-type: none"> Does the waiver request include supporting documentation sufficient to show the availability, quantity, and/or quality of the iron and/or steel product for which the waiver is requested? <ul style="list-style-type: none"> Supplier information or other documentation indicating availability/delivery date for materials Project schedule Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of materials Does supporting documentation provide sufficient evidence that the contractors made a reasonable effort to locate domestic suppliers of materials, such as a description of the process for identifying suppliers and a list of contacted suppliers? Based on the materials delivery/availability date indicated in the supporting documentation, will the materials be unavailable when they are needed according to the project schedule? (By item, list schedule date and domestic delivery quote date or other relevant information) Is EPA aware of any other evidence indicating the non-availability of the materials for which the waiver is requested? 					
Examples include: <ul style="list-style-type: none"> Multiple waiver requests for the materials described in this waiver request, for comparable projects in the same State Multiple waiver requests for the materials described in this waiver request, for comparable projects in other States Correspondence with construction trade associations indicating the non-availability of the materials 					
<ul style="list-style-type: none"> Are the available domestic materials indicated in the bid documents of inadequate quality compared those required by the project plans, specifications, and/or permits? 					

Attachment 3: Example Loan Agreement Language

ALL ASSISTANCE AGREEMENT MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN SRF ASSISTANCE AGREEMENTS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the Loan (including those imposed by the 2014 Appropriations Act and related SRF Policy Guidelines) which the Participant understands includes, among other, requirements that all of the iron and steel products used in the Project are to be produced in the United States (“American Iron and Steel Requirement”) unless (i) the Participant has requested and obtained a waiver from the Agency pertaining to the Project or (ii) the Finance Authority has otherwise advised the Participant in writing that the American Iron and Steel Requirement is not applicable to the Project.

Comply with all record keeping and reporting requirements under the Clean Water Act/Safe Drinking Water Act, including any reports required by a Federal agency or the Finance Authority such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the Clean Water Act/Safe Drinking Water Act and this Agreement may be a default hereunder that results in a repayment of the Loan in advance of the maturity of the Bonds and/or other remedial actions.

Attachment 4: Sample Construction Contract Language

ALL CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN ALL CONTRACTS IN PROJECTS THAT USE SRF FUNDS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the City of _____ (“Purchaser”) and the _____ (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Attachment 5: Sample Certification 1

The following information is provided as a sample letter of certification for BABA and AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: BABA and AIS Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

BIL extends this procurement requirement to all construction projects going forward with the inclusion of the Build America, Buy America Act (BABA). Starting on May 14, 2022, all steel, iron, manufactured products, non-ferrous metals, plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables), glass (including optic glass), lumber, and drywall used in infrastructure projects for federal financial assistance programs must be produced in the United States.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

Attachment 5: Sample Certification 2

The following information is provided as a sample letter of certification for BABA and AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: BABA and AIS Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

BIL extends this procurement requirement to all construction projects going forward with the inclusion of the Build America, Buy America Act (BABA). Starting on May 14, 2022, all steel, iron, manufactured products, non-ferrous metals, plastic and polymer-based products (including polyvinyl chloride, composite building materials, and polymers used in fiber optic cables), glass (including optic glass), lumber, and drywall used in infrastructure projects for federal financial assistance programs must be produced in the United States.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

ATTACHMENT H
PROJECT SIGNAGE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN - 3 2015

OFFICE OF WATER

MEMORANDUM

SUBJECT: Guidelines for Enhancing Public Awareness of SRF Assistance Agreements

FROM: Andrew D. Sawyers, Ph.D., Director
Office of Wastewater Management (4201M) *ASawyers*

Peter C. Grevatt, Director
Office of Ground Water and Drinking Water (4601M) *Peter Grevatt*

TO: Water Management Division Directors
Regions I-X

Last year, the Environmental Protection Agency (EPA) implemented an agency-wide initiative to enhance public awareness of EPA assistance agreements nationwide. The Office of Water has developed guidelines to inform states how this initiative should be implemented in the State Revolving Fund (SRF) Programs.

The guidelines were developed with input from EPA and state SRF staff. The guidelines recognize that each of the state SRF programs and the projects they fund are different and that one implementation method will not work for everyone. Therefore, as a result of input from the states, the guidelines offer a number of options that can be used to enhance public awareness of SRF assistance agreements.

Implementation of these guidelines will begin with the awarding of the FY 2015 SRF capitalization grants. A term and condition on compliance with the guidelines is to be included in all new SRF grants.

Please have your staff provide copies of the guidelines to your states. Questions regarding the guidelines should be directed to Sheila Platt (202/564-0686) or Howard Rubin (202/564-2051).

Attachment

Enhancing Public Awareness of SRF Assistance Agreements

Introduction

The Environmental Protection Agency (EPA) is currently implementing an agency-wide initiative focused on signage to enhance public awareness of EPA assistance agreements nationwide. The intention of this effort is to communicate the positive impact and benefits of EPA funding around the country and increase awareness surrounding the improvements communities receive as a result of State Revolving Fund (SRF) assistance. Projects implemented with Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) monies are included in this initiative, as many CWSRF and DWSRF assistance agreements have direct and tangible benefits to populations around the country.

EPA's Office of Water developed these guidelines as a way to inform states of this directive and how it should be implemented in the SRF programs. The primary objective is to enhance public understanding of the positive benefits of CWSRF and DWSRF funding to towns, cities, municipalities and water systems. To that end, states are presented with a range of options for implementing these guidelines. All of these options achieve the ultimate goal of communicating to a broad audience the positive role EPA funding of the state CWSRF and DWSRF programs plays in communities across the country.

The information in the guidelines was developed with input from EPA and state staff across the country as well as the members of the State-EPA Workgroup. The guidelines recognize the wide range of project types, varied locations and different institutional approaches among states and communities. Therefore, providing states and SRF assistance recipients maximum flexibility is optimal. The guidelines allow selection of the implementation method which best balances two goals. First, it should satisfy the overall objective of communicating EPA's role in funding assistance agreements that achieve positive benefit. Second, the implementation method should be practically and financially viable for states and communities and avoid any overly burdensome investment of time and resources. In some cases, it might be appropriate for a state to select a combination of options listed below, provided this does not result in excessive cost to communities.

Project Selection Requirements

Signage requirements will not be required to apply to all SRF projects. Signage will be considered an equivalency requirement for SRF programs. States should select a set of borrowers and/or projects totaling a funding amount equivalent to the amount of their federal capitalization grant to satisfy the signage requirement. There are no other requirements or restrictions on which projects should or should not participate in this initiative. Therefore, it is at the discretion of the state SRF program to select projects most able to efficiently and effectively comply in a way that

meets the intention to enhance public awareness without significant financial hardship to the state or its borrowers. This can be done either through the selection of specific projects or borrowers, or by setting a threshold within the state for which projects will be requested to meet signage requirements. States should note that they have the option of selecting different implementation options for different borrowers depending on the location, project type and available resources. Borrowers and/or projects complying with the signage requirement must ensure limited English proficient individuals have meaningful access to activities receiving EPA funds, consistent with Executive Order 13166 and EPA Order 1000.32.

In this regard, to increase public awareness of projects serving communities where English is not the predominant language, States should encourage recipients when implementing a particular signage option to translate the language used (excluding the EPA logo or seal) into the appropriate non-English language(s). The costs of such translation are allowable, provided the costs are reasonable.

Although the signage requirement does not apply to all SRF projects, we recommend that states encourage all borrowers/projects to notify the public of the benefits of the projects and the role of the SRF, using one of the options below.

Summary of Options

The guidelines present a number of options which communities can explore to implement EPA's signage policy. The option selected should meet all of the above basic requirements while remaining cost-effective and accessible to a broad audience. The guidelines describe the following strategies as acceptable options for communities to follow:

- Standard signage
- Posters or wall signage in a public building or location
- Newspaper or periodical advertisement for project construction, groundbreaking ceremony, or operation of the new or improved facility
- Online signage placed on community website or social media outlet
- Press release

Each of these options is described in more detail in the sections below.

Implementation Option: Standard Signage

EPA recommends that large projects that involve significant expansion or construction of a new facility elect to publicize through standard signage. This option should be selected for projects where the sign would be near a major road or thoroughfare or where the facility is in a location at which this would effectively publicize the upgrades. Some facilities will not find this an appropriate or cost-effective solution. For example, investing in a large road sign for a facility that is located in a rural area or where access is limited to a smaller service road would likely not be an optimal solution.

Signs can also be located away from the project site if there is another reasonable alternative. For example, a community may elect to place a sign advertising the project near a body of water that receives discharge from a particular facility.

States selecting projects that will implement this requirement through use of a traditional sign should ensure the following are included:

- The name of the facility, project and community
- Project cost
- The State Agency/SRF administering the program
- The EPA and State Agency logos (EPA logo may only be used on a sign)

If the EPA logo is displayed along with logos of other participating entities, the EPA logo must not be displayed in a manner that implies that EPA itself is conducting the project. Instead, the EPA logo must be accompanied with a statement indicating that the recipient received financial assistance from EPA for the project. As provided in the sign specifications from the EPA Office of Public Affairs (OPA), the EPA logo is the identifier for assistance agreement projects. States are required to ensure that recipients comply with the sign specifications provided by the OPA, available at http://www.epa.gov/ogd/tc/epa_logo_seal_specifications_for_infrastructure_grants.pdf. To obtain the appropriate EPA logo graphic file, the recipient should send a request directly to OPA and include the EPA Project Officer in the communication.

Implementation Option: Posters or Brochures

Smaller projects, projects located in rural areas, and other efforts may find that it is more cost-effective and practical to advertise efforts through creation of a poster or smaller sign. If the project involves nonpoint source or green infrastructure components, those can be described at the discretion of the state or community.

The poster or brochure and acknowledgement should be visible, as well as a website or other source of information for individuals that may be curious about the SRF program. The community could also implement this option as a short pamphlet or brochure that is placed in one of these locations for community members to read.

Posters or brochures should be placed in a public location that is accessible to a wide audience of community members. This can include, but is not limited to:

- Town or City Hall
- Community Center
- Locally owned or operated park or recreational facility
- Public Library
- County/municipal government facilities
- Court house or other public meeting space

Given the low cost for producing multiple copies of the same poster, pamphlet, or brochure, communities can explore options for displaying these posters in several locations simultaneously. This would achieve the overall objective of reaching a broad audience and publicizing the project.

States have the option of creating a template verbiage and layout to provide to borrowers, particularly smaller or disadvantaged communities. This could reduce the burden on small municipalities which may or may not have the staffing capacity to meet signage requirements on their own.

States selecting projects that will implement this requirement through use of posters or brochures should ensure the following are included:

- Name of facility, project and community
- State SRF administering the program
- Project is wholly or partially funded with EPA funding
- Brief description of project
- Brief description of the water quality benefits the project will achieve

Implementation Option: Newsletter, Periodical or Press Release

For communities where there is no suitable public space or where advertisement through signage is unlikely to reach community members effectively, projects can be advertised in a community newsletter or similar periodical. States can use guidelines from their standard public notice practices. For new construction, if a groundbreaking ceremony is to be held, an announcement could publicize or accompany publicity for this event.

In some cases, it may be appropriate for the state agency to issue a formal press release announcing construction of a new facility. Distributing a single prepared statement concisely summarizing the project purpose and the joint funding from EPA and state resources can reach a wide audience as the statement goes through multiple news outlets. Programs should consider whether or not this is an option that is likely to effectively publicize the CWSRF or DWSRF program in local news sources.

If a recipient decides on a public or media event to publicize the accomplishment of significant events related to construction as a result of EPA support, EPA must be provided with at least a ten working day notice of the event and provided the opportunity to attend and participate in the event.

States selecting projects that will implement this requirement through use of a newsletter, periodical or press release should ensure the following are included:

- Name of facility, project and community
- State SRF administering the program

- Project is wholly or partially funded with EPA funding
- Brief description of the project
- Brief listing of water quality benefits to be achieved

Implementation Option: Insert or Pamphlet in Water/Sewer Bill

Utilities can consider including a single-page insert within water and sewer bills that are mailed to residents and users in the area. This approach would effectively publicize the project to those individuals directly benefitting from the project. The flyer or insert could emphasize the interest rate and financial savings that the community achieved by taking advantage of SRF funds as well as the environmental and public health benefits to the community.

States selecting projects that will implement this requirement through use of an insert or pamphlet in water/sewer bill should ensure the following are included:

- Name of facility, project and community
- State SRF administering the program
- Project is wholly or partially funded with EPA funding
- Brief description of the project
- Brief listing of water quality benefits to be achieved

Implementation Option: Online & Social Media Publicity

Many communities are increasingly finding that the online forum is the most cost-effective approach to publicizing their SRF programs and reaching a broad audience of stakeholders. Online “signage” should follow the minimum information guidelines above and may appear on the town, community or facility website if available. In some cases, communities may be active on social media sites such as Facebook or Twitter. These can be used as an opportunity for publicizing projects and information about how SRF funds are being used in the community. These online announcements/notices may be appropriate for settings where physical signage would not be visible to a wide audience. They can be a more cost-effective option than traditional signs or publicity in print media outlets. This option may be most useful where the community’s website is a well-recognized source of information for its residents.

In the case of some projects, such as nonpoint source or sponsorship projects, there might be additional opportunities for online publicity through partner agencies or organizations. This could take place either on the organization’s website or again through social media outlets.

States selecting projects that will implement this requirement through use of online & social media publicity should ensure the following are included:

- Name of facility, project and community
- State SRF administering the program
- Project was wholly or partially funded with EPA funding
- Brief description of the project

- Brief listing of water quality benefits to be achieved

Suggested Language for Alternate Options

For any of the alternate implementation options listed above, SRF programs have discretion to structure their signage as they see appropriate. The language below is offered as an option for use in posters, pamphlets, brochures, press releases, or online materials. States may consider using the following:

“Construction of upgrades and improvements to the [Name of Facility, Project Location, or WWTP] were financed by the [Clean Water/Drinking Water] State Revolving Fund. The [CWSRF/DWSRF] program is administered by [State Agency] with joint funding from the U.S. Environmental Protection Agency and [State Name]. This project will (description of project) and will provide water quality benefits [details specifying particular benefits] for community residents and businesses in and near [name of town, city, and/or water body or watershed to benefit from project.] [CWSRF/DWSRF] programs operate around the country to provide states and communities the resources necessary to maintain and improve the infrastructure that protects our valuable water resources nationwide. “

For projects in certain areas, states should consider whether or not it is appropriate to include additional details about the projects. Specific benefits, such as reduction of CSO events, lessening of nutrient pollution, reducing contaminant levels or water pumping costs, or improvements to a particular water body, may be of interest to community residents. In these cases, including them would further serve to showcase positive efforts financed by the SRF programs. Additionally, for projects with components that meet Green Project Reserve (GPR) criteria, States may elect to detail these particular improvements. For example, the state could include quantitative improvements in energy efficiency or water conservation achieved by project upgrades. If the project includes green infrastructure components such as rain gardens and green roofs that have environmental and aesthetic benefits to the community, these can be described briefly as well. Again, this additional information can be included at the discretion of the state when it is appropriate, given the project type, location, and the type of signage or publicity effort selected.

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of this Contract generally consists of the construction of a 2.0 million gallon per day (mgd) water treatment plant (WTP) for the existing surface water supply. The WTP will utilize magnetic ion-exchange (MIEX) treatment, GreensandPlus filtration, PFAS contactors, disinfection, chemical feed systems, pumps, and appurtenances. Building components including HVAC, plumbing, fire sprinkler system, and electrical equipment shall be incorporated into the new WTP. Additional work will include the site work, utilities installation, below-grade concrete tanks and foundation, masonry building, and finishes. Additive Alternate A includes demolition of the existing chemical feed facility and existing chlorine contact tank, and removal of equipment and concrete pads inside the existing pump station.
- B. All work shall be Substantially Completed within 730 consecutive calendar days of the date fixed in the Notice to Proceed and completed in full (Final Completion) within 800 consecutive calendar days of the date fixed in the Notice to Proceed.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01013

FACILITY INTERFERENCE WITH PROPOSED WORK

PART 1 GENERAL

1.01 LOCATION OF UNDERGROUND FACILITIES

- A. Facilities and other underground locations shown on the Drawings are from the best sources available to the Owner at the time of this Contract preparation and are furnished only for information and convenience of the Contractor and are not guaranteed.
 - 1. It is agreed and understood that the Owner does not warrant or guarantee that the subsurface locations of existing pipes, structures or other underground phenomena actually encountered during construction shall be the same as those shown on the Drawings.
 - 2. It is further agreed and understood that the Contractor shall not use or be entitled to use any of the information made available to him on the plans or obtained in any examination made by him as a basis of any claim or demand against the Owner or the Engineer, because of any variance between the information made available and the subsurface locations of natural phenomena, existing pipes or other structures as actually encountered during the construction work, except as may otherwise be provided for this Section.
 - 3. In general, main line facilities only are shown and not individual connections from main line to buildings.
 - 4. The presence of a structure along a proposed pipeline generally indicates that there will be a corresponding connection to it from whatever main line facilities are in the street.
 - 5. The Contractor shall take all necessary steps, including field inspections and consultations with the Utility Owner and Property Owners, to ensure that the most up to date information and accurate information available is used to mark the field location of the facilities, including service connections, prior to construction.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.

1.03 PIPE LOCATIONS

- A. Pipe lines and structures installed under this Contract will be located substantially as indicated on the Drawings. The Engineer reserves the right to make such modifications in location and grade as may be found desirable to avoid interference with existing structures and/or facilities or to avoid unsatisfactory locations, all as he may see fit as in the best interests of the Owner.

1.04 PROTECTION OF UNDERGROUND FACILITIES AND DAMAGES THERETO

- A. The Contractor shall notify “Dig Safe” of his operations at least 72 hours prior to construction on any portion of the project.
 - 1. The Contractor shall notify all utility companies of his operations sufficiently in advance of construction and take all measures necessary to avoid damage or undue interruption to the utilities' normal services.
 - 2. Utility poles shall be braced by the Contractor as directed by the utilities' owner and all costs shall be included in the contract unit prices.
 - 3. No additional compensation shall be allowed because of damage to facilities due to test pit excavation.

1.05 CONDITION OF EXISTING FACILITIES

- A. In general, poor physical condition of existing facilities shall not be an acceptable basis for claiming additional compensation.
 - 1. Further, protection or repair of existing facilities outside of the Trench Width, W, shall not be considered as a valid basis for additional compensation.
 - 2. The Contractor shall take all prudent steps to make himself aware of the physical condition of the existing facilities expected to be encountered, and to adjust his operations accordingly.

PART 2 PRODUCTS (not applicable)

PART 3 EXECUTION

3.01 INTERFERENCE AND RELOCATION OF FACILITIES

- A. Interference by Utilities
 - 1. Interference shall be considered to exist when the facility intrudes within the Trench Width, W, for various depths to invert, as tabulated on the Drawings.

3.02 INTERFERENCE COSTS AND CLAIMS

- A. Claims for the costs of protecting, repairing, and/or replacing facilities which interfere will only be considered when the Engineer determines that:
 - 1. The facility is not shown on the Drawings.
 - 2. The facility is shown but the facility is found in a location substantially different from the location shown.
 - 3. The Contractor has necessarily incurred additional cost because of the interference.
 - 4. In general, claims will not be considered for cross trench service connections which are not shown on the Drawings or incorrectly shown.
- B. It is routine and customary in work of this kind to encounter subsurface or other conditions which require changes in pipe line grade, alignment and/or relocation of facilities or other adjustments which may necessitate rescheduling of the Contractor's work.

1. The Contractor should allow contingency in his bid for schedule adjustments commonly encountered.
 2. The Engineer shall in general not approve claims for delay because of changes in alignment or rescheduling of construction.
- C. Where facilities are shown on the Drawings to interfere, the Contractor is required to maintain facilities in operation in their existing locations.
1. Such interferences and the protection and repair of such facilities shall not constitute the basis of an approvable claim.
 2. The cost to maintain such facilities in operation in their existing location shall be included by the Contractor in his bid.

3.03 RELOCATION OF FACILITIES

- A. Relocation of facilities is required:
1. Where indicated on the Drawings.
 2. When a clearance of at least three (3) inches vertical and horizontal separation cannot be achieved between the existing facility and the new pipe line.
 3. To comply with minimum water/sewer separation.
 4. To comply with minimum requirements of the utility owner.

Relocation may be avoided in certain cases by line and grade adjustments.

- B. Existing facilities shall not be disturbed until the facility owner and the Engineer agree to the arrangements and the Engineer requests the relocation to proceed in writing.
1. If the owners of the facilities permit, and the Engineer so requests, the Contractor shall do the whole or any portion of the relocation work.
 2. Relocation of facilities will generally be by new pipe and appurtenances, approved and furnished by the facility owner, except where it is feasible in the opinion of the Engineer and facility owner to utilize existing materials.
 3. If so requested by the facility owner, the Engineer may direct the Contractor to furnish the material.
 4. All removed materials remain the property of the facility owner.

3.04 RELOCATION COSTS AND CLAIMS

- A. All costs of temporary relocations for the Contractor's convenience shall be borne by the Contractor.
- B. Relocation costs for all facilities specified on the Drawings to be relocated shall be the responsibility of the Contractor and be included in the Contractor's bid prices, including those specifically for facility relocations, if such are included.
- C. Relocation costs for publicly owned facilities not specified on the Drawings to be relocated, but directed to be relocated by the Engineer in writing, shall be paid in accordance with General Conditions Par. 5.05, B.
- D. Relocation costs for privately owned utilities for which relocation is required by the work of this Contract, will not be approved by the Engineer for payment as Extra Work.

- E. Exceptions as determined by the Engineer shall be paid in accordance with General Conditions Par. 5.05, B.

3.05 PRIVATE FACILITY COMPANY CLAIM DISTINCTIONS

- A. Claims against the Owner by the Contractor for the cost of delays or damage repair sustained by the Contractor because of damage to or interferences between privately owned public facilities and the proposed work will not be considered valid for additional compensation.
 - 1. Claims involving privately owned facilities must be settled between the Contractor and the facility owner.
- B. The Owner reserves the right to exercise, or not to exercise, any rights he may have to require relocation of privately owned public facilities at the facility company's expense in case of interferences.
 - 1. If the Owner does not exercise such rights, no claims against the Owner for not exercising such rights shall be approved by the Engineer.

3.06 FACILITY SERVICE CONNECTIONS AND WORK

- A. The Contractor shall make all arrangements with the facility companies for temporary and permanent services and relocations required under this Contract, subject to the conditions described elsewhere in these Specifications.
 - 1. Facility companies in the area of work, and/or expected to provide service to the work, shall be arranged for and if required paid for at no additional expense to the Owner.

END OF SECTION

SECTION 01019

DRAWINGS

PART 1 GENERAL

1.01 DESCRIPTION

- A. The Contract Drawings may be modified by addenda and shall be issued for construction purposes.
 - 1. These Drawings may be supplemented or superseded by such additional general and detail drawings as may be necessary and desirable as the work progresses.
 - 2. The Drawings issued for construction at that time or after the signing of the Contract Documents shall become the Contract Drawings.
- B. Dimensions:
 - 1. Except where noted, the Drawings are made to scale, but all working dimensions shall be taken from the figured dimensions or by actual measurements at the work, and in no case by scaling the prints.
 - 2. The Contractor shall study and compare all Drawings and verify all figures before laying out or constructing the work and shall be responsible for any and all errors in the Contract work which might have been avoided thereby.
 - 3. The Contractor shall take all measurements of existing established conditions notwithstanding the figured dimensions on the Drawings.
 - 4. When figured dimensions are not in agreement with the Contractor's measurements, the Engineer shall be immediately notified and the Engineer will promptly adjust the same.
 - 5. Whether or not an error is believed to exist, deviations from the Drawings and the dimensions given thereon shall be made only after approval in writing is obtained from the Engineer.
- C. Diagrammatic Drawings:
 - 1. Plans or Drawings where the work is shown diagrammatically indicate approved working systems. Every piece of material, fittings, fixtures or small equipment is not shown, nor every difficulty or interference that may be encountered to carry out the true intent and purpose of the Contract Documents.
 - 2. All necessary parts to make complete, approved working systems or installation shall be included as if detailed on these Drawings.
 - 3. The location of pipe lines and appurtenances shown on the Drawings, unless exactly dimensioned, shall be considered as approximate only.
 - 4. The Contractor shall adjust the position of the pipe lines and appurtenances in accordance with good working practices to meet interferences, provide proper clearance and provide proper access space for operation and maintenance.
- D. Typical Details:
 - 1. Where shown on the Drawings, typical details shall apply to each and every item of the Contract work where such items are incorporated and the detail is applicable.
 - 2. Unless noted otherwise, such typical details shall be applicable in full.

- E. Copies of Drawings Furnished:
1. The Engineer shall furnish the Contractor, without charge, up to six copies of the Drawings and Specifications for execution of the Contract work.
 2. Additional copies will be furnished at the Contractor's expense when requested, except that any copies of available plans and specifications returned from the bidders in good condition will be furnished to the Contractor without charge.
 3. All Drawings and Specifications are the property of the Owner.
 4. The Contractor shall return all copies if so requested.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 EXISTING AND ADJACENT CONDITIONS

- A. Wherever existing conditions or construction not required as part of the work of the Contract are shown, they are so shown as a source of information only. The Engineer, while believing such information is substantially correct, assumes no responsibility thereof.
1. Before starting any work that might be affected by such existing construction or conditions, the Contractor shall have made himself familiar with all conditions affecting the nature and manner of performing the work, and shall not be entitled to any extra compensation for any work or expense arising from or caused by his neglect to have verified all existing conditions and requirements.

3.02 DISCREPANCIES

- A. If the Contractor during the progress of the work, discovers any discrepancies between the Drawings and the Specifications, any errors or omissions on the Drawings, or any discrepancies between the physical condition of the Work and the Drawings, then the Contractor shall immediately notify the Engineer, who will promptly adjust the same. Any work performed after such discovery without the approval of the Engineer, shall be at the risk and expense of the Contractor.

END OF SECTION

SECTION 01021

ALTERNATES

PART 1 GENERAL

1.01 DESCRIPTION

- A. Provide alternate Bids as described in this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 00300 - Bid Form
- B. Section 01025 - Measurement And Payment

1.03 PROCEDURES

- A. Provide alternate bid to be added to the amounts of the Base Bid if the corresponding changes in scope is accepted by the Owner
- B. Include within the alternate bid price all costs, including materials, installation, and fees.
- C. Show the proposed alternate amount opposite its proper description on the BID FORM.

1.04 SELECTION OF ALTERNATES

- A. The addition or deletion of work associated with each alternate will depend on the Owner's available funding for the project.
 - 1. Additive alternates will be added to the base bid in the order in which they appear on the bid form.
 - 2. Deductive alternates will be deducted from the base bid in the order they appear on the bid form.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 DESCRIPTION

- A. The following sub-sections describe the measurement of and payment for the Work to be done under the items listed in the BID SCHEDULE.
- B. Each unit or lump sum price stated in the BID SCHEDULE constitutes full compensation as herein specified for each item of work completed in accordance with the Contract Documents, including cleaning up.
- C. The Contractor shall carefully acquaint himself with all work associated with each payment item and shall have no claim for his unfamiliarity with the requirement of various items.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 00300 Form For General Bid
- B. Section 00305A through 00305N Form For Sub Bid

1.03 PAYMENT ITEMS

- A. Item 1 – The work of the general bid being all work other than that covered by Item 2.
- B. Item 2 – The work of all filed sub-bids including:
 - 1. Section 04101 Masonry
 - 2. Section 05101 Miscellaneous and Ornamental Iron
 - 3. Section 07101 Waterproofing, Dampproofing, and Caulking
 - 4. Section 07201 Roofing
 - 5. Section 08501 Metal Windows
 - 6. Section 08801 Glazing
 - 7. Section 09301 Tile
 - 8. Section 09501 Acoustical Tile
 - 9. Section 09701 Resilient Floors
 - 10. Section 09901 Painting
 - 11. Section 15301 Fire Protection Sprinkler Systems
 - 12. Section 15401 Plumbing
 - 13. Section 15501 Heating, Ventilation and Air Conditioning
 - 14. Section 16101 Electrical

PART 2 MEASUREMENT AND PAYMENT

2.01 GENERAL

- A. For accounting purposes, for the Engineer's convenience and as an aid in determining progress payments and price additions or deductions for Contract modifications, the Contractor shall furnish to the Engineer a schedule of values per Specification Section 01026 which shall be approved prior to the first application for payment.
- B. The price breakdown schedule shall apportion the total amount of the Contract Price for each separate item among the main features or costs that form the completed Work. The price breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract and overhead costs, as well as profit, and shall cover all work involved for the properly completed item and feature listed.
- C. Any amount claimed for subcontracts shall be supported by a similar schedule of values with the total amount shown by this price under the Contract Price stated in the Form For General Bid.

2.02 ITEM 1 – WORK OF THE GENERAL CONTRACTOR

- A. The lump sum price for Item 1 shall constitute full compensation for furnishing all labor, materials, tools and equipment necessary to construct the Wading River Water Treatment Plant Work, complete, as required by the Contract Documents, except for that work specifically included for payment under Item 2. Item 1 shall include any other work which is not specified or shown but is necessary to complete the Work. Payment of the lump sum will be based on physical progress for each activity in accordance with the approved Schedule of Values.

2.03 ITEM 2 – WORK OF THE FILED SUB-BIDS

- A. The lump sum prices for the subdivisions of Item 2 shall constitute full compensation for furnishing all labor, materials, tools and equipment necessary to provide the work of each listed filed sub-bid required by the Contract Documents including the applicable Sections or Divisions listed in 1.03.B of this Section. Payment of each individual lump sum filed sub-bid will be based on the physical progress for each activity in accordance with the approved Schedule of Values.

2.04 ADDITIVE ALTERNATE A – DEMOLITION

- A. The lump sum price for Additive Alternate A shall constitute full compensation for furnishing all labor, materials, tools and equipment necessary to demolish of the existing chemical feed station and existing chlorine contact tank including all work by the electrical sub-contractor to disconnect equipment, permits, removal of concrete pads, disconnection and proper capping of water and waste lines, proper disposal of all equipment and waste including any remaining fuel oils for the generator within the existing chemical feed building and fuel tanks within the existing pump station, and installation of new concrete floor where equipment and concrete pads are removed all outlined within the contract documents. Payment of the lump sum will be based on physical progress for each activity in accordance with the approved Schedule of Values.

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01026

SCHEDULE OF VALUES

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Provide a detailed breakdown of the agreed Contract Sum showing values allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.

1.03 GENERAL

- A. For accounting purposes for the Engineer's convenience and as an aid in determining progress payments and price additions or deductions for Contract modifications, the Contractor shall furnish to the Engineer a schedule of values which shall be approved.
 - 1. The schedule of values shall apportion the total amount of the Contract price(s) for each separate item among the main features or costs that form the completed Work.
 - 2. The price breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract and overhead costs, as well as profit, and shall cover all work involved for the properly completed item and feature listed.
 - 3. Any amount claimed for subcontracts shall be supported by a similar schedule of values with the total amount shown by this price under the Contract price stated in the bid form.

1.04 SUBMITTALS

- A. Prior to first application for payment, submit a proposed Schedule of Values to the Engineer.
 - 1. Meet with the Engineer and determine additional data, if any, required to be submitted.
 - 2. Secure the Engineer's approval of the Schedule of Values prior to submitting first application for payment.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01027

APPLICATION FOR PAYMENT

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Comply with procedures described in this Section when applying for progress payment and final payment under this Contract.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these specifications.
- B. Progress payments are described in the General Conditions.
- C. Payments upon Substantial Completion and Completion of the Work are described in the General Conditions.

1.03 QUALITY ASSURANCE

- A. Prior to start of construction, secure the Engineer's approval of the Schedule of Values required to be submitted under Section 01026, Schedule of Values.
 - 1. During progress of the Work, modify the Schedule of Values as approved by the Engineer to reflect changes in the Contract Sum due to change orders or other modifications to the Contract.
 - 2. Base requests for payment on the approved Schedule of Values.

1.04 SUBMITTALS

- A. Informal Submittal: Unless otherwise directed by the Engineer:
 - 1. Make an informal electronic submittal of Request for Payment by filling in pertinent portions of AIA Document G702 "Application and Certificate for Payment" or EJCDC Document C-620 "Contractor's Application for Payment," plus continuation sheet or sheets.
 - 2. Make this preliminary submittal to the Engineer at the end of each month.
 - 3. Revise the informal submittal of Request for Payment as agreed, between both parties, initialing all copies.
- B. Formal Submittal: Unless otherwise directed by the Engineer:
 - 1. Make a formal submittal of Request for Payment by filling in the agreed data, by typewriter or neat lettering in ink, on AIA Document G702 "Application and Certificate for Payment" or EJCDC Document C-620 "Contractor's Application for Payment," plus continuation sheet or sheets.
 - 2. Sign and notarize the six (6) original Applications for Payment.
 - 3. Submit the originals of the Applications for Payment plus six (6) identical copies of the continuation sheet or sheets to the Engineer.

4. Submit affidavits from the General Contractor and Filed Sub-Contractors confirming that all vendors, sub-contractors and sub sub-contractors have been paid for all work completed and included on the previous application for payment.
5. Submit Partial Lien Waivers from all vendors, sub-contractors and sub-sub contractors for all work completed and included on the previous application for payment.
6. Final Affidavits of Payment and Lien Waiver Certificates shall be submitted with the final application for payment.
7. The Engineer shall compare the formal submittal with the approved informal submittal and when approved, shall sign the Applications for Payment and forward them along with the continuation sheet or sheets to the Owner. Once executed by the appropriate officials, the Owner will distribute:
 - a. One copy to Contractor
 - b. Two copies to Owner
 - c. One copy to Engineer
 - d. Two copies to the MassDEP for SRF loan requirements.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01045

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SUMMARY

- A. This Section establishes general requirements pertaining to cutting (including excavating), fitting, and patching of the work required to:
 - 1. Make the several parts fit properly;
 - 2. Uncover work to provide for installing, inspecting, or both, of ill-times work;
 - 3. Remove and replace work not conforming to requirements of the Contract Documents; and
 - 4. Remove and replace defective work.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.
 - 2. In addition to other requirements specified, upon the Engineer's request uncover work to provide for the inspection by the Engineer of covered work, and remove samples of installed materials for testing.
 - 3. Do not cut or alter work performed under separate contracts without the Engineer's written permission.
 - 4. Cutting and patching required for the installation of new work in conformance with the contract documents shall be the responsibility of the contractor performing the installation of the related work.
 - a. Large penetrations through concrete slabs/walls or through precast planks shall be coordinated with the General Contractor.
 - b. Large penetrations through masonry walls shall be coordinated with the contractor performing the masonry work.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

1.03 SUBMITTALS

- A. Request for Engineer's consent:
 - 1. Prior to cutting which effects structural safety, submit written request to the Engineer for permission to proceed with cutting.
 - 2. Should conditions of the work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify the Engineer and secure his written permission and the required Change Order prior to proceeding.

- B. Notices to the Engineer:
 - 1. Prior to cutting and patching performed pursuant to the Engineer's instructions, submit cost estimate to the Engineer. Secure the Engineer's approval of cost estimates and type of reimbursement before proceeding with cutting and patching.
 - 2. Submit written notice to the Engineer designating the time the Work will be uncovered, to provide for the Engineer's observation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. For replacement of items removed, use materials complying with pertinent Sections of these Specifications.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

- A. Inspection:
 - 1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, patching, and backfilling.
 - 2. After uncovering the work, inspect conditions affecting installation of new work.
- B. Discrepancies:
 - 1. If uncovered conditions are not as anticipated, immediately notify the Engineer and secure needed directions.

3.02 PAYMENT FOR COSTS

- A. The Owner will reimburse the Contractor for cutting and patching performed pursuant to a written Change Order, after claim for such reimbursement is submitted by the Contractor.
- B. Perform other cutting and patching needed to comply with the Contract Documents at no additional cost to the Owner.

END OF SECTION

SECTION 01050

FIELD ENGINEERING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work included: Provide such field engineering services as are required for proper completion of the work including, but not necessarily limited to:
 - 1. Establishing and maintaining lines and levels.
 - 2. Structural design of shores, forms, and similar items provided by the Contractor as part of his means and methods of construction.

1.02 RELATED WORK

- A. Documents affecting work of this section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.
- B. Additional requirements for field engineering may also be described in other Sections of these Specifications.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for the proper performance of the work of this Section.

1.04 PROCEDURES

- A. In addition to procedures directed by the Contractor for proper performance of the Contractor's responsibilities:
 - 1. Locate and protect control points before starting work on the site.
 - 2. Preserve permanent reference points during progress of the work.
 - 3. Verification of all reference points.
 - a. If a discrepancy is found, promptly notify the Engineer.
 - 4. Promptly advise the Engineer when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.
 - a. Upon direction of the Engineer, require the Field Engineer to replace reference stakes or markers.
 - b. Locate such replacements according to the original survey control.

1.05 SURVEY REQUIREMENTS

- A. Contractor shall establish a minimum of two permanent benchmarks on site; referenced to data established by survey control points.
- B. Contractor to establish and maintain control lines and levels. Locate and lay out by instrumentation and similar appropriate means:

1. Site improvements, including pavements, stakes for grading, fill and topsoil placement, utility locations, slopes, and invert elevations.
2. Grid or axis for structures.
3. Building foundation, column locations, and floor elevations.
4. Controlling lines and levels required for mechanical and electrical trades.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01092

ABBREVIATIONS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Listing of Abbreviations: The listing of abbreviations in this Specification Section represent the Standard Organization named.
- B. Related Work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.
 - 2. All related Specification Sections shall be used in conjunction with this Section.

1.02 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the Standard, except when more stringent requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date for receiving bids.

1.03 LISTING OF STANDARD ORGANIZATIONS AND THEIR ABBREVIATIONS

AA	Aluminum Association
AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Institute
ADC	Air Diffusion Council
AGA	American Gas Association
AGCA	Associated General Contractors of America
AHDGA	American Hot Dip Galvanizers Association
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Constructors
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
BIA	Brick Institute of America

COPI	Certificate of Proper Installation
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Association
DCAM	Comm. of Massachusetts Division of Capital Asset Management
DEP	Department of Environmental Protection
DHI	Door and Hardware Institute
DIPRA	Ductile Iron Pipe Research Association
EJCDC	Engineers Joint Contract Documents Committee
EPA	Environmental Protection Agency
FM	Factory Mutual
Fed. Spec.	Federal Specification
HI	Hydraulic Institute
IEEE	Institute of Electrical and Electronics Engineers
ISA	Instrument Society of America
ISO	International Standards Organization
MIA	Masonry Institute of America
MIEX	Magnetic Ion-Exchange
MIL.	Military Specification
MMED	Mansfield Municipal Electric Department
MSBC	Massachusetts State Building Code
MSS	Manufacturers Standardization Society of the Valve and Fitting Industry
NAAMM	National Association of Architectural Metal Manufacturers
NCMA	National Concrete Masonry Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NPDES	National Pollutant Discharge Elimination System
NRCA	National Roofing Contractors Association
NSPC	National Standard Plumbing Code
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PPI	Plastic Pipe Institute
PS	Product Standards of the National Bureau of Standards
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPI	Society of the Plastics Industry
SSPC	Steel Structures Painting Council
SWPPP	Stormwater Pollution Prevention Plan
TCA	Tile Council of America
TPI	Truss Plate Institute
UL	Underwriters Laboratories

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01100

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work of this section consists of special project procedures during construction including:
1. General construction sequence of the work to be performed.
 2. Contractor's emergency service requirements.
 3. Permits.
 4. Construction permits.
 5. Existing treatment plant and equipment demolition.
 6. Treatment plant start-up.
 7. Conservation Commission Order of Conditions.
 8. Temporary excavation and support.
 9. Groundwater conditions/dewatering.
 10. Protection of underground facilities and damages thereto.
 11. Traffic control and uniformed police officers.
 12. Contact time tracer study.
 13. Temporary construction fence.
 14. Coordination with service providers.
 15. Equipment and material staging areas.
 16. Existing pavement restoration.
 17. Site access for MassDEP representatives.
 18. Contractor's project team.
 19. Process Valve Identification List.
 20. DWSRF Signage.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 GENERAL CONSTRUCTION SEQUENCE OF WORK TO BE PERFORMED:

- A. The Contractor's attention is directed to the fact that a specific construction sequence is essential for the successful completion of this project. The existing Wading River Water Treatment Facility is owned and operated by the City of Attleboro and can provide up to approximately 25 percent of the Town's water supply annually. The existing facility must remain in operation and be able to supply potable water to the City's distribution system during the entire construction of the proposed WTP.
- B. Upon receipt of the Owner's Notice to Proceed, the Contractor shall submit construction schedules in accordance with Section 01310 detailing the work to be performed and the schedule to complete the work, as well as Contractor's proposed testing procedures and methodology. The Engineer will review and comment on the proposed schedules and forward to the Owner for review and approval. When the Engineer and Owner are

satisfied with the Contractor's Preliminary Analysis, the Engineer shall issue a formal notice of approval for the Contractor to begin field work.

- C. The Contractor shall be responsible for reviewing the Conservation Commission's Order of Conditions (included in Appendix F of the Contract Documents) for specific requirements and limitations as well as incorporation of the Commission's schedule of work requirements into the construction schedule.
- D. All new SCADA system equipment shall be installed, programmed and tested prior to removing any existing SCADA system/control equipment from service. The Contractor shall protect and maintain all existing SCADA and control equipment throughout the duration of the project until the new WTP is completed, approved and placed into service
- E. The general sequence of construction is listed below. The Contractor shall prepare a detailed baseline progress schedule including general contractor's and subcontractor's work and the milestones listed below. Some work items, such as existing equipment removal, will require advance written approval by the Owner and Engineer. These items will be confirmed upon review of the Contractor's work schedule. The Contractor shall follow the requirements listed in Section 01310 if the progress of work alters from the baseline progress schedule. The general sequence of construction shall be as follows:
 - 1. Construct the proposed WTP in accordance with the Contract Documents.
 - 2. Acquire Owner and Engineer approval, then relocate the existing PFAS removal treatment vessels from the existing emergency PFAS treatment facility to the new WTP. Relocation shall minimize downtime of the existing facility while allowing the Owner to meet system demands if needed.
 - 3. Install, program and test the new SCADA system at the new WTP while maintaining the existing SCADA system in operation at the existing facility.
 - 4. Complete facility startup, acquire occupancy permit from Building Department, and request the Owner obtain approval from the Massachusetts Department of Environmental Protection (MassDEP) to activate the new WTP and pump water into the distribution system.
 - 5. After the Owner obtains MassDEP approval and the occupancy permit is obtained, make the final connection of the finish water main from the WTP to the distribution system
 - 6. Conduct the final acceptance test, and upon successful completion of the test, request "Substantial Completion" from the Owner.
 - 7. Initiate official operation of the new SCADA system and decommission the existing SCADA system in operation at the existing facility.
 - 8. Complete remaining "Punchlist" work following "Substantial Completion" and request "Final Completion" from the Owner.
 - 9. Demolish the existing chemical feed facility, chlorine contact tank, and associated structures in accordance with the Contract Documents (Additive Alternate A).
 - 10. Remove and dispose of selective equipment from the existing pump station and emergency PFAS treatment facility in accordance with the Contract Documents. Before disposal of equipment, coordinate with the AWD to retain any equipment that they may choose to keep (Additive Alternate A).

3.02 CONTRACTOR'S EMERGENCY SERVICE REQUIREMENTS

- A. Any contractor (General, Sub, etc.) whose place of business is located beyond the vicinity of the site of work and who does not maintain local headquarters 24 hours a day must make satisfactory arrangements with the Owner to service emergencies or complaints which may occur at night, over the week-end, or when the job is shut down.
 - 1. If the Contractor does not, the Owner may make arrangements, and the cost will be charged to the Contractor.
 - 2. Before the final estimate is certified for payment, the Contractor shall make similar arrangements to cover the warranty period.

3.03 PERMITS

- A. The Contractor's attention is directed to the fact that the following permits have been obtained regarding the construction of the WTP and associated infrastructure and are located in the Appendices of the Contract Documents:
 - 1. MassDEP BRP WS 24 – Approval to Construct a Facility to Treat > 1 MGD
 - 2. Town of Mansfield, Conservation Commission - Order of Conditions
 - 3. Town of Mansfield, Planning Board – Special Permit and Site Plan Decision
 - 4. National Pollution Discharge Elimination System (NPDES) Remediation General Permit approval for dewatering activities from the Environmental Protection Agency
- B. The Contractor shall be responsible for reviewing and adhering to all requirements of the above-mentioned permit approvals.
- C. The Contractor and/or their sub-contractors shall be responsible for obtaining all local and/or state permits with this project including fees, which include but are not necessarily limited to, building permit, electrical, plumbing, fire alarm, road opening permit, and trench opening permit. The Contractor shall include fees in its Contract Price. The Contractor and/or their sub-contractors shall provide all labor costs required to prepare local permit applications.

3.04 CONSTRUCTION PERMITS

- A. The Contractor's attention is directed to the fact that the following permits and certifications regarding the construction of the WTP and associated infrastructure will be obtained during the construction period:
 - 1. Disposal Works Installer Permit from the Mansfield Board of Health and Massachusetts Department of Environmental Protection (to be obtained by Contractor).
 - 2. Installation Compliance Certification for New Emergency Engines & Emergency Turbines from the Massachusetts Department of Environmental Protection (to be obtained by Owner with information on the generator furnished by the Contractor and Electrical Contractor upon request).
- B. The Contractor shall be responsible for applying for and obtaining a General Construction Permit from the Environmental Protection Agency in accordance with National Pollution Discharge Elimination System (NPDES) stormwater program. The Contractor will be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) for the Project.

3.05 EXISTING TREATMENT PLANT AND EQUIPMENT DEMOLITION

- A. All equipment removed from the interior of the existing Wading River pump station, emergency PFAS removal facility, chemical feed facility, and chlorine contact tank as part of this contract shall be disposed of by the Contractor at its expense unless otherwise determined in the field with the Owner and Engineer.
- B. Decommissioning of all equipment at the existing Wading River Water Treatment Plant shall not occur until after written approval by MassDEP to activate the new WTP and pump treated water into the distribution system, an occupancy permit has been issued by the local Building Inspector, the new WTP has passed the final acceptance test as defined in Section 01650-Facility Startup, and the Owner has accepted "Substantial Completion". The Contractor is required to obtain authorization from the Owner prior to starting any demolition work (Additive Alternate A).
- C. Items at the existing Wading River pump station, emergency PFAS removal facility, and chemical feed facility that shall remain property of the Owner include but are not limited to:
 - 1. Self-Cleaning Filters
 - 2. Booster Pump Skid
 - 3. Variable Frequency Drives
 - 4. Bag Filters
 - 5. Chemical Feed Pumps
 - 6. Computers

3.06 TREATMENT PLANT START-UP

- A. Discharge of Water During Start-Up
 - 1. The Contractor shall make the necessary provisions to dispose of water used for the start-up and testing of the WTP as identified in Section 01650, Facility Startup. The Contractor may discharge spent water to the site's stormwater management system provided measures are taken to prevent erosion and that the discharge does not adversely impact the function of the stormwater management system (i.e., rain events, standing water for more than 48 hours, etc.) or introduce heavily chlorinated water into the stormwater management system as detailed in Section 02675, Disinfecting of Water Mains. The Contractor shall monitor the overall condition and functionality of the stormwater management systems during this period and report any irregularities to the Engineer.
 - 2. The Contractor shall make every effort to reduce the amount of water pumped to waste during the start-up of the WTP if possible.
 - 3. The Contractor shall furnish and install all equipment and provisions necessary to treat, dechlorinate and properly dispose of the water during the testing period at no expense to the Owner.

3.07 CONSERVATION COMMISSION ORDER OF CONDITIONS

- A. The Contractor's attention is directed to the fact that the project is subject to the Order of Conditions issued by the Mansfield Conservation Commission. The Contractor shall be responsible for obtaining, reviewing and complying with all requirements of the Order of Conditions, a copy of which is included in Appendix F.

- B. Contractor shall be responsible for posting a sign at the construction site displaying the MassDEP File Number for the project. Sign shall be between two square feet and three square feet in size.
- C. Contractor shall coordinate completion of Buffer Enhancement Plan, as shown on Contract Drawing 02-C-08 with the Engineer and Mansfield Conservation Commission Agent.

3.08 TEMPORARY EXCAVATION AND SUPPORT

- A. The Contractor shall submit a formal and temporary excavation support plan to the Engineer for review and approval prior to implementation. The excavation support system shall be designed by a Professional Engineer licensed in the Commonwealth of Massachusetts in accordance with the contract drawings and Section 02160, Support of Excavation.
- B. Excavation of the WTP shall be constructed using open cuts. Isolated deeper tanks will likely require temporary shoring, including trench boxes, wood shoring or sheeting dependent upon depths, and the control of groundwater. Any temporary excavation support system shall be removed following construction of the structure.

3.09 GROUNDWATER CONDITIONS / DEWATERING

- A. The Contractor's attention is directed to the soil borings in Appendix A, as a part of both Geotechnical Reports. Groundwater levels can fluctuate, and the Contractor shall be fully responsible for managing and dewatering any groundwater to properly complete construction at no additional cost to the Owner.
- B. The Contractor shall submit a formal dewatering plan to the Engineer for review and approval prior to implementation.
- C. The Contractor may have to provide dewatering during excavation of the site. Dewatering shall be performed inside the shoring system or open cut by pumping from filtered sumps installed below the bottom of the excavation. For deeper tanks below the WTP, the Contractor may be required to provide more advanced dewatering during the excavation and construction. Dewatering shall be performed inside any temporary excavation support system and may require deep pumping wells to discharge groundwater to the ground surface.

3.10 PROTECTION OF UNDERGROUND FACILITIES AND DAMAGES THERETO

- A. The Contractor shall notify all utility companies of its operations sufficiently in advance of construction and take all measures necessary to avoid damage or undue interruption to the utilities' normal services.
- B. Where indicated on the Drawings, directed, or permitted at the Contractor's request, the Contractor shall dig test pits to locate the various underground facilities.
 - 1. Size of test pit shall be as specified in Section 02015, Test Pits, of these Specifications.
- C. The Contractor shall pay, at no additional expense to the Owner, all costs associated with:
 - 1. Protecting and supporting underground facilities.

2. Repairing, replacing, or relocating underground facilities which are damaged by the Contractor's operations.
 3. Temporarily or permanently relocating underground facilities for the Contractor's convenience.
- D. The Contractor shall take all prudent steps to make itself aware of the physical condition of the existing underground facilities expected to be encountered.
1. Claims by the Contractor for repair of damages alleged to be the result of the physical condition or faulty installation workmanship of the existing underground facilities, outside of the specified trench width, will in general not be considered by the Owner for extra work payment.
 2. For such underground facilities within the specified trench width, claims will be considered if, in the opinion of the Engineer, such damage was unavoidable.

3.11 TRAFFIC CONTROL AND UNIFORMED POLICE OFFICERS

- A. The Contractor shall be responsible for providing and maintained traffic control signs and devices as outlined below and in Specification Section 01570 – Traffic Regulation.
- B. At a minimum, Contractor shall furnish and install the following signs on Balcom Street in the vicinity of the entrance to the construction site. These signs shall remain in place throughout the duration of construction.
1. Two signs stating “Trucks Entering Ahead” shall be installed prior to commencement of construction and remain in place throughout the duration of construction. One sign shall be installed 500 feet east of the construction site entrance and one sign installed 500 feet west of the construction site entrance.
 2. When work is scheduled to occur within the Town of Mansfield Right-of-Way, two signs stating “Police Officer Ahead” shall be installed prior to commencement of construction and remain in place throughout the duration of construction. One sign shall be installed 1,000 feet east of the construction site entrance and one sign installed 1,000 feet west of the construction site entrance.
 3. Two signs stating “Construction Ahead” shall be installed prior to commencement of construction and remain in place throughout the duration of construction. One sign shall be installed at the intersection of Otis Street and one sign shall be installed at the intersection of Gilbert Street.
 4. The Owner may provide electronic variable message boards to alert motorists of construction activities on Balcom Street on days when high volume truck traffic is anticipated and when excavation near Balcom Street is scheduled.
- C. Contractor shall coordinate with the Owner and Mansfield Police Department for scheduling of detail officers per the Mansfield Police Department requirements.
- D. One police detail officer shall be provided at the entrance to the construction site from Balcom Street on days when high truck traffic is anticipated. This includes but is not necessarily limited to days when site excavation occurs and during concrete pours.
- E. The number of police detail officers required on days when excavation at/near Balcom Street is scheduled shall be at the discretion of the Mansfield Police Department.
- F. Payment for police details will be made directly to the Mansfield Police Department by the Owner.

- G. Contractor shall provide the Engineer with a traffic management plan for all construction activities for review and approval before the work occurs.

3.12 CONTACT TIME TRACER STUDY

- A. The Contractor shall provide labor and equipment to assist the Engineer and Owner with completion of a Contact Time Tracer Study for the clearwell at least 45 days prior to the anticipated startup of the WTP. The Tracer Study requires the injection of a tracer chemical and sampling at various flow rates to determine the detention time and effective contact time. Sample analysis will be performed by the Engineer.
- B. The hydroflourosilic acid chemical feed system provided at the WTP by the Contractor will be used as the tracer chemical.

3.13 TEMPORARY CONSTRUCTION FENCE

- A. Contractor shall provide temporary construction fencing as specified in Specification Section 01567, Environmental Protection, as needed.
- B. Temporary construction fencing shall be used to isolate and protect work areas that present a danger to the public including but not limited to excavated areas, staged equipment and materials, or other areas of the construction site at the discretion of the Owner or Engineer.

3.14 COORDINATION WITH SERVICE PROVIDERS

- A. The Contractor shall coordinate work with the following service providers to install new services to the WTP. Electric utility division of work is noted on the Drawings. Conduits for telephone, cable/internet, fiber optic shall be provided by the Electrical filed sub-bid between Balcom Street and the access points in the WTP as shown on the Drawings. Service cables/wires for telephone and cable/internet shall be furnished and installed by the service provider in these conduits between Balcom Street and the access points in the WTP. Fiber optic cable shall be provided by the Electrical filed sub-bid. Conduit and cables/wires from the WTP access points to termination points as shown on the Drawings shall be furnished and installed by the Electrical filed sub-bid. Payment for work done by the following service providers associated with the new services will be made directly to the service provider by the Owner.
 - 1. Mansfield Municipal Electric Department (MMED) (electric)
 - 2. Verizon (telephone)
 - 3. Comcast (cable/internet)

3.15 EQUIPMENT AND MATERIAL STAGING AREAS

- A. Staging area locations for equipment and stockpiling of materials shall be coordinated with and approved by the Owner prior to the start of construction at the preconstruction conference.
- B. Materials shall not be stored within the fenced areas of the East and West Basins.

3.16 EXISTING PAVEMENT RESTORATION

- A. All open cut trenches shall be opened and closed within the same work day. Any open trenches in Balcom Street shall be topped with temporary trench pavement as described in Section 02513.
- B. The Contractor shall remove the temporary trench pavement prior to the installation of permanent trench pavement. Temporary trench pavement shall remain in place for a minimum of 90 days prior to installation of permanent trench pavement.
- C. Balcom Street shall receive a final mill and overlay to the southwest of the existing bridge and concrete approach pad as noted on the drawings.

3.17 SITE ACCESS FOR MASSDEP REPRESENTATIVES

- A. MassDEP representatives shall have access to the Project work whenever it is in preparation or progress.
- B. MassDEP representatives shall be provided facilities for such Project access and inspection.

3.18 CONTRACTOR'S PROJECT TEAM

- A. Prior to the commencement of construction, the Contractor shall submit to the Engineer a list of the Contractor's project team members, including names and labor classifications.
- B. The Contractor's team assigned to this project shall remain fixed throughout the duration of the construction phase.
- C. Changes to the Contractor's project team are prohibited unless authorized by the Owner and Engineer.

3.19 PROCESS VALVE IDENTIFICATION LIST

- A. A process valve identification list is included in Appendix E for informational purposes only listing the process valves associated with the proposed water treatment plant. This process valve identification list is not guaranteed to be inclusive of all process valves. Contractor shall refer to the design drawings and specifications to verify all process valves required for the construction of the proposed water treatment plant. The lack of inclusion of any valves on this process valve identification list will not provide a basis for any changes to the required Contract scope of work or Contract Price.

3.20 DWSRF SIGNAGE

- A. Contractor shall furnish and install a 4'x8'x3/4" plywood signboard or approved equal sign material displaying the project name, public water system name, project cost, state agency funding the project (MassDEP), EPA logo, and MassDEP logo. Provide 4"x4" pressure treated signposts or other adequate supports to mount sign at a location at the project site entrance approved by the Owner and Engineer.
- B. Project signs or other means of publicizing the project to comply with the "Guidelines for Enhanced Project Awareness of SRF Assistance Agreements" issued by the United States Environmental Protection Agency on June 3, 2015, as applicable, regarding the use of signs or other methods of enhancing awareness of SRF project.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 DESCRIPTION

A. Preconstruction Conference:

1. The Contractor shall not commence work until a conference has been held at which representatives of the Contractor, Engineer, and Owner are present. The preconstruction conference will be arranged by the Engineer.
2. The sequence of construction will be established during the preconstruction conference.

B. Progress Meetings:

1. The Contractor shall be available for progress meetings on site during construction every two weeks, or as determined by the Engineer/Owner, dependent on the status of the project.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.
 - 1. Individual requirements for submittals also may be described in pertinent Sections of these Specifications.
- B. Work Not Included:
 - 1. Submittals which are not required shall not be reviewed by the Engineer.
 - 2. The Contractor may require his subcontractors to provide drawings, setting diagrams and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer unless specifically called for within the Contract Documents.

1.03 SHOP DRAWINGS AND SAMPLES

- A. The Contractor shall submit to the Engineer for review all shop drawings, catalog cuts, setting schedules and such other drawings as may be necessary for the prosecution of the work in the shop and in the field as required by the Contract Documents.
 - 1. Submittals which are incomplete or difficult to read shall be rejected.
 - 2. Deviations from the Contract Documents shall be called to the attention of the Engineer at the time of the first submission of shop drawings and other drawings for consideration.
 - 3. The Engineer's review of any drawings shall not release the Contractor from responsibility for such deviations.
 - 4. Shop drawings shall be submitted with such promptness as to cause no delay in the Contractor's work or the work of any other Contractor.
 - 5. Schedules for reinforcing steel shall receive the Contractor's immediate attention, upon award of Contract.
- B. When submitted for the Engineer's review, all shop drawings shall bear the Contractor's certification that he has reviewed, checked and approved the shop drawings, that they are in compliance with the requirements of the Contract Documents, and that he has verified all field measurements and construction criteria, materials, catalog numbers and similar data.
- C. All samples called for in the Specifications or required by the Engineer shall be furnished by the Contractor and shall be submitted to the Engineer for his review.

1. Samples shall be furnished so as not to delay fabrication, and to allow the Engineer reasonable time for the consideration of the samples submitted.
- D. Checking of submittals is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents.
1. Any action shown is subject to the requirements of the Contract Documents.
 2. Contractor is responsible for: dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the satisfactory performance of his work.
- E. The Contractor may only proceed with fabrication and construction for items on returned submittals marked “1-No Exception Taken” or “2-Make Corrections Noted – Resubmittal Not Required.”
1. Resubmit submittals if marked “3-Amend and Resubmit” or “4-Rejected.”
 2. Submittals provided for information purposes only will be marked “5-Not Subject to Review – Receipt Acknowledged.”
- F. The Contractor shall identify each submittal numerically in accordance with the following format: [SPECIFICATION SECTION] - [SUBMITTAL NUMBER] - [RESUBMITTAL].
1. The first number corresponds to the specification section under which the particular shop drawing is submitted.
 2. The second number is the numerical order of the submittal within a particular specification section based on when the submittal is transmitted.
 3. The third number is zero for an original submittal. The first resubmittal of a shop drawing previously reviewed by the Engineer, if necessary, shall be identified by the same numbering system with (-A) used as a suffix to indicate it is a resubmittal. Each additional resubmittal shall be identified by the same numbering system with the following letter alphabetically used as the suffix.
 4. For example, 02200-1-0 is the original submittal for the first shop drawing submitted under specification section 02200. 02200-2-A is the resubmittal for the second shop drawing submitted under specification section 02200.
- G. A maximum of two (2) submittals of each shop drawing will be reviewed by the Engineer. If additional submittals are required due to the Contractor’s neglect to meet the requirements of the Contract Documents or the corrections and modifications noted by the Engineer in the first two submittals, then the Engineer will review the additional submittals at the expense of the Contractor.
- H. The Contractor shall furnish such samples of material as may be required for examination and testing.
1. All samples of materials for tests shall be taken according to ASTM specifications or as provided in the Contract Documents.
- I. Within 14 days of the date fixed in the Notice to Proceed, the Contractor shall submit a Schedule of Submittals to the Engineer for review and approval in accordance with the General Conditions. The Schedule of Submittals including, but not limited to, shop drawings and samples shall include a list of required submittals, the date when each submittal will be transmitted for review and approval, and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

3.01 GENERAL

- A. The Contractor shall transmit all shop drawings to the Engineer in electronic (PDF) format.
- B. The intent of the electronic submittals is to expedite the construction process reducing paperwork, improving information transfer, and decreasing administration time.
- C. The electronic submittal process is not intended to replace the requirement to submit actual color samples or physical material samples for review and approval by the Engineer.

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULES

PART 1 GENERAL

1.01 SUMMARY

- A. To assure adequate planning and execution of the work so that the Work is completed within the number of calendar days allowed in the Contract, and to assist the Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work, prepare and maintain the schedules and reports described in this Section.

1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.
- B. Definitions:
 - 1. “Day,” as used throughout the Contract unless otherwise stated, means “calendar day.”

1.03 QUALITY ASSURANCE

- A. Employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data and in preparing and issuing periodic reports as required by this Section.
- B. Perform data preparation, analysis, charting and updating in accordance with standards approved by the Engineer.
- C. Reliance upon the approved schedule:
 - 1. The construction schedule as approved by the Engineer shall be an integral part of the Contract and shall establish interim completion dates for the various activities under the Contract.
 - 2. Should any activity not be completed within 15 days after the stated scheduled date, the Engineer may request the reason for the delay in schedule from the Contractor. The Contractor shall supply the requested information and the steps which he intends to take to get back on schedule.
 - 3. It is expressly understood and agreed that failure by the Engineer to exercise the option either to order the Contractor to expedite an activity or to expedite the activity by other means shall not be considered to set a precedent for any other activities.

1.04 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Preliminary Analysis: Within ten (10) calendar days after the Contractor has received the Owner’s Notice to Proceed, submit the preliminary construction schedule to the Owner and Engineer in electronic PDF format.

- C. Construction Schedule: Within thirty (30) calendar days after the Contractor has received the Owner's Notice to Proceed, submit a Critical Path Method (CPM) network and a computer-generated print out of a construction schedule prepared in accordance with Part 2 of this Section to the Owner and Engineer.
- D. Periodic Reports: See Paragraph 2.02.B of this Section.

PART 2 PRODUCTS

2.01 CONSTRUCTION ANALYSIS

- A. Supplemental to the critical path schedule, the Contractor shall provide a detailed work schedule, projected at least one month in advance. The implementation of the work schedule and the coordination required shall constitute the basic agenda of the coordination and planning meetings.
- B. The order of new construction shall be discussed with the Engineer well in advance of the contemplated construction and the intended schedule shall meet with his approval. The Contractor, prior to starting work, shall submit to the Engineer a written description of the methods he plans to use in doing the work, including any necessary plans depicting the proposed details as well as a schedule of expected dates for beginning and completing the various buildings, structures and appurtenances which make up the work. Work shall not commence on a given portion of the project until the schedule for that portion (and preferably the entire schedule) has been approved by the Engineer. The Contractor shall be required to update this schedule periodically as necessary.
- C. A guideline CPM network shall be submitted for approval to include the following items: A feasible plan to complete the project within the time specified in this contract; Mandatory milestone dates (milestones shall be designated in the guideline CPM network by asterisks); Calendar dates will be substituted when the construction start date is established.

2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. This schedule shall include a Critical Path Network and a computer-generated print out. The schedule shall account for all subcontracts in addition to the work of the Contractor.
- B. The network shall be provided in the form of a time scaled schedule. The computer print out shall include as a minimum, the earliest starting, earliest finish, latest starting, and latest finish dates, and the total float for each activity. The Contractor shall update (monitor) and run the schedule at least monthly and shall submit to the Engineer both the network and computer print out, both in duplicate, at the same time the pay estimate is prepared. The schedule shall contain all of the items of the periodic estimate and pay schedule.

PART 3 EXECUTION

3.01 SCHEDULE AND UPDATES

- A. The monthly schedule update (monitoring) shall include the following items.

1. Network: Activities that are completed or in process are to be identified on the network by contrasting heavy lines. Each activity and work done should be proportional to the percentage of progress achieved to date.
2. Computer print out: The percentage progress status of each activity shall be shown on the computer print out. The percentage progress status will be used to support the Contractor's periodic pay estimate. Actual start and completion dates are to be included in the computer print out. All activities started and in process should be flagged in the computer print out.
3. The Engineer reserves the right to modify any schedule as required to meet the prevailing conditions. Review of the work schedules by the Engineer shall not relieve the Contractor of responsibilities regarding specified project completion times and liquidated damages.

END OF SECTION

SECTION 01354

STORMWATER POLLUTION PREVENTION PLAN

PART 1 GENERAL

1.01 GENERAL

- A. The Contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) for construction activities at the project site. The SWPPP shall bear the stamp of a Professional Engineer or the signature of a Certified Professional in Erosion and Sediment Control including a certification that the plan complies with applicable local, state and federal regulations for storm water pollution prevention.
- B. The SWPPP shall incorporate provisions for Environmental Protection, as specified in Section 01567, such that only a single document is required. All requirements of this Section 01354 shall be incorporated into the SWPPP document.

1.02 SUBMITTALS

- A. Submit a Storm Water Pollution Prevention Plan to the Owner and the applicable Conservation Commission before initiating any site work.
- B. Submit a Dewatering Activities Plan to the Owner and the applicable Conservation Commission before initiating any site work.
- C. Submit copy of EPA Construction General Permit and, as applicable, EPA Construction Dewatering permit to the Owner and the applicable Conservation Commission.

1.03 REQUIREMENTS

- A. Prepare a Storm Water Pollution Prevention Plan (SWPPP) including Erosion and Sediment Control measures for the Project Site in accordance with the EPA NPDES General Permit for Storm Water Discharges from Construction Activities, which shall herein be referred to as the "General Permit", and, as applicable, NPDES "General Permit for Construction Dewatering Activity Discharges to certain waters of the States of Massachusetts and New Hampshire".
- B. Inclusion of this Section in the Specifications means that a SWPPP is required as part of this Contract. In some cases, the Owner may require a SWPPP even when the area of disturbance of the project is less than the areas requiring a SWPPP under State or Federal laws.
- C. Contractor is advised that the local Conservation Commission will conduct a review of the SWPPP. The Commission may require several weeks to complete, and all comments shall be implemented by the Contractor.
- D. SWPPP and Erosion Control measures shall be maintained, modified as necessary, throughout the course of site construction activities until satisfactory vegetative growth is established to return the site to pre-construction conditions and to prevent impairment of

receiving waters, at which time the Contractor shall remove all remaining structures, and properly dispose of accumulated sediment.

- E. Drainage structures shall be constructed as soon as the necessary grades have been achieved. Construction of detention basins and down gradient drainage swales shall be in accordance with the Contract Drawings, specifications, and accepted SWPPP.

1.04 PERFORMANCE STANDARDS

- A. At no time shall construction operations or any related disturbance of the site result in the impairment of local waterways. For the purpose of this Section, "impairment" shall mean either:
 - 1. The release or entry into any receiving water of water more turbid than the receiving water; or
 - 2. The deposition of visible sediment into such waters.
- B. Any impairment shall be corrected immediately by the Contractor to prevent further impairment. Contractor shall be at all times liable for any enforcement or legal action resulting from such impairment.
- C. In addition, and without notice to the Contractor, the Owner shall also have the right, based on the Owner's independent assessment, to stop work or engage other contractor(s) to construct or correct such work as may be necessary to prevent such impairment, and to charge all costs related to such corrective or additional actions against the Contract.
- D. For acceptance, the SWPPP must bear the certification identified above and must meet the requirements of the applicable regulations. Acceptance of a SWPPP does not in any way imply that the SWPPP will be adequate in preventing impairment of waters, or that maintenance and modification will not be necessary. Rather, acceptance of the Plan authorizes the Contractor to begin installation of the control measures under the assumption that the appropriate maintenance and modification will be required throughout the life of the project to meet the project requirements.
- E. The Contractor's responsibilities under this Section shall end upon final completion and payment of the Work of the entire Contract.

1.05 CONTENTS OF PLAN

The SWPPP shall include the following items and shall be prepared in accordance with the EPA's guidance on *Developing Your Stormwater Pollution Prevention Plan* available on EPA's website at <https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp>. Any deviations from template guidance or the requirements listed below shall be explained and justified in the SWPPP.

- A. Site Description. Each plan shall provide a description of pollutant sources and other information as indicated:
 - 1. A description of the nature of the construction activity;
 - 2. A description of the intended sequence of major activities which disturb soils for major portions of the site (e.g. grubbing, excavation, grading);
 - 3. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading, or other activities;

4. Estimates of initial and total excavation dewatering volumes based upon the footprint size of the WTP and associated appurtenances, the nature and classification of soils onsite, and the estimated schedule of construction.
 5. An estimate of the runoff coefficient of the site after construction activities are completed and existing data describing the soil or the quality of any discharge from the site;
 6. A site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which will not be distributed, the location of major structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where storm water is discharged to surface or ground water(s); and
 7. The name of the receiving water(s) and areal extent of wetland acreage at the site.
- B. Controls. Each plan shall include a description of appropriate controls and measures that will be implemented at the construction site. The plan will clearly describe for each major activity identified above, appropriate control measures and the timing during the construction process that the measures will be implemented. The description and implementation of controls shall address the following minimum components.

1.06 STORM WATER MANAGEMENT MEASURES

- A. Measures used by the Contractor to control storm water discharges on the site include, but are not limited to the following:
1. Silt sacks or equivalent measures where the discharge cannot be observed (such as wrapping catch basin grates in filter fabric) may not be used.
 2. Storm water from the site may not be pumped to a sanitary sewer.
 3. Runoff of potable water used for concrete curing operations shall not be allowed to reach the storm water system or open water due to the levels of residual chlorine.
 4. The Contractor shall dispose of all water with due care and shall not infringe on the rights of others on the Site, of adjacent property owners and of the public. The Contractor shall pay all cost in connection with the removal of storm water.
 5. Minimum design basis for on-site structures shall be a "2-year, 24-hour" storm event.

1.07 EROSION CONTROL MEASURES

- A. Measures used by the Contractor to control erosion and sediment loading include, but are not limited to, the following:
1. Tarping or covering of material and spoil piles;
 2. Proper sequencing of disturbances to minimize open cut;
 3. Prompt backfill and protection of disturbed surfaces;
 4. Hay and/or straw bales;
 5. Seeding and mulching;
 6. Silt fencing;
 7. Temporary drainage diversion structures;
 8. Sod;
 9. Detention Basins; and
 10. Filtration Systems.

- B. Measures shown on the Contract Drawings (e.g., sedimentation basins, swales) shall be incorporated into the Plan wherever possible unless equivalent or improved methods are approved.
- C. Silt sacks or equivalent measures where the discharge cannot be observed (such as wrapping catch basin grates in filter fabric) may not be used.
- D. Erosion control structure(s) installation shall consider all factors which contribute to erosion and sedimentation including, but not limited to, the following:
 - 1. Topographic features of the project area;
 - 2. Types, depth, slope and area extent of the soils;
 - 3. Proposed alteration of the area;
 - 4. Amount of run-off from the project area;
 - 5. Staging of earthmoving activities; and
 - 6. Temporary control measures and facilities for use during earthmoving.
- E. Drainage structure(s) installation shall consider all factors which contribute to proper drainage including, but not limited to, the following:
 - 1. Topographic features of the project area;
 - 2. Required cross-section of drainage structures; and
 - 3. Proper grading and surfacing of drainage structures to promote positive drainage while limiting scour.
- F. The primary method of erosion control shall be the timing and limitation of open cuts and prompt stabilization of site work.
- G. Silt fences and/or staked straw bales shall be installed at the site down gradient of work areas. The straw bales, silt bales and silt fence shall be installed in accordance with the Contract Drawings or as directed by the Engineer.
- H. Wherever possible, the Contractor shall divert stormwater away from passing through the site.
- I. Sediment barriers shall be used at storm drain inlets; across minor swales and ditches; and at other applications where the structure is of a temporary nature and structural strength is not required. Sediment barriers are temporary berms, diversions, staked straw bales, or other barriers that are constructed to retain sediment on-site by retarding and filtering storm runoff.
- J. All clearing is to be done in such a manner as to provide minimum exposure of soils wherever possible. The Contractor is to provide approved mulching and is to take other protective measures as required to protect undisturbed, distributed, and new soils from erosion.
- K. All temporary disposal sites and stockpile areas – both on and off the Project Site - shall be so located to eliminate the potential for runoff of silt and soil to natural water courses. Where necessary, the Contractor shall provide temporary measures designed to retain runoff from the site for a period of time sufficient to settle out suspended materials before disposal of this water.

1.08 SEDIMENT CONTROL MEASURES

- A. All siltation and sedimentation caused by erosion due to clearing, grading and removal of vegetation or other ground cover shall be retained on-site. Use interceptor swales at the base of disturbed areas, draining to temporary settling basins with sediment sumps equipped with filtration devices, if approved, and as appropriate to the site.
- B. The following guidelines shall apply in the design of temporary settling basins and sediment sumps, if submitted to, and approved by, the Engineer.
 - 1. The design of the settling basin shall prevent short-circuiting. Generally, the length of the basin shall be at least twice the width, with the inlet and the outlet at opposite ends. Entrance swales and pipes shall be designed to discharge at the bottom of the basin and prevent erosion at the entrance point.
 - 2. The settling basin shall be designed with a minimum two feet deep sediment sink below flow line, together with 0.5 acre-inch of storage per acre of open disturbed area of the site. These two dimensions together with the 2:1 length to width ratio shall determine basin geometry. These are minimum values and shall be increased if required by soil type or duration of project.
 - 3. Sediment settling systems shall discharge through sand filters or other devices as required to trap sediment and meet the specified performance standards. In general, filtration through gravel or over weirs will not be sufficient to meet these standards unless supplemented with additional silt fencing and haybales or straw bales.

1.09 OBSERVATIONS

- A. Observations will be performed by the Owner or a third party hired by the Owner in accordance with the NPDES General Permit.
- B. Issues addressed on observation reports submitted to the Contractor shall be addressed immediately. All non-compliances must be resolved within 24 hours.
- C. Based on the results of the observations, the SWPPP shall be modified by the Contractor as necessary, in accordance with the NPDES General Permit.
- D. If a new general permit is issued in accordance with Phase II of the NPDES regulations while this project is under construction, the Contractor shall modify the SWPPP to comply with the new permit conditions.
- E. The Contractor shall at all times keep access roads and public roads clear of mud and construction debris and maintain dust control to the satisfaction of the Engineer and applicable Conservation Commission.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01385

PRECONSTRUCTION VIDEO RECORDING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work included: The Contractor shall provide all labor, materials, tools and equipment necessary to furnish a video recording of the site prior to the start of the Work.

1.02. RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions and all Divisions of these Specifications.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 VIDEO RECORDING

- A. Equipment
 - 1. The equipment employed in the video recording shall be sufficient to provide a clear, full color and detailed visual description of the site along with a detailed narrative description of physical conditions and location.
- B. Area Included
 - 1. The area included in the video recording shall include the actual location of the work, the adjacent property and all other areas which could reasonably be anticipated to be affected by the work.
 - 2. Particular attention should be paid to the existing condition of private property immediately adjacent to the work.
- C. Documentation
 - 1. The video recordings shall be conducted at a slow walking pace and shall record the physical conditions in the area described above.
 - 2. The narrative description shall be recorded simultaneously and shall supplement the visual description particularly with regard to location.
 - 3. Contractor shall furnish three (3) complete copies of the video recording to the Engineer prior to the start of the work.

D. Personnel

1. All personnel employed by the Contractor in video recording shall be experienced in all aspects of the process, including recognition of important physical conditions in and around the site of the Work.

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included:
 - 1. Provide such testing and inspecting as are specified to be furnished by the Contractor in this Section and/or elsewhere in the Contract Documents.
 - 2. Cooperate with any testing agency that may be independently selected by Owner and all others responsible for testing and inspecting the Work.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specification.
 - 2. Requirements for testing are described in various Sections of these Specifications.
 - 3. Where no testing requirements are described, but the Owner decides that testing is required, the Owner may require such testing to be performed under current pertinent standards for testing.

1.02 QUALITY ASSURANCE

- A. All testing laboratories will be submitted to Engineer for approval in accordance with ASTM E329.
- B. Testing, when required, will be in accordance with all pertinent codes and regulations and with selected standards of the American Society for Testing and Materials.

1.03 PRODUCT HANDLING

- A. Promptly process and distribute required copies of test reports and related instructions to assure necessary re-testing and replacement of materials with the least possible delay in progress of the work.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 PAYMENT FOR TESTING

- A. Contractor shall pay for all testing services required by the Contract Documents.
- B. Retesting: When initial tests indicate noncompliance with the Contract Documents, subsequent retesting occasioned by the noncompliance shall be performed by the same testing agency, and costs thereof shall be paid in full by Contractor.

3.02 CODE COMPLIANCE TESTING

- A. Inspections and tests required by codes or ordinances, or by a plan approval authority, and by which are made by a legally constituted authority, shall be the responsibility of and shall be paid for by the Contractor.

3.03 CONTRACTOR'S CONVENIENCE TESTING

- A. Inspecting and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

3.04 COOPERATION WITH TESTING LABORATORY

- A. Representatives of the testing laboratory shall have access to the Work at all times and at all locations where the Work is in progress. Provide facilities for such access to enable the laboratory to perform its functions properly.

3.05 TAKING SPECIMENS

- A. All specimens and samples for testing, unless otherwise provided in the Contract Documents, shall be taken by the testing personnel. All sampling equipment and personnel will be provided by the testing laboratory. All deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

3.06 SCHEDULE FOR TESTING

- A. Establishing schedule: By advance discussion with the testing laboratory, determine the time required for the laboratory to perform its test and to issue each of its findings. Submit schedule to Engineer for approval.
- B. Revising schedule: When changes of construction schedule are necessary during construction, coordinate all such changes with the testing laboratory as required.
- C. Adherence to schedule: When the testing laboratory is requested to test, but is prevented from testing or taking specimens due to incompleteness of the work, all extra charges for testing attributable to the delay may be backcharged to the Contractor.

END OF SECTION

SECTION 01445

MANUFACTURER'S SERVICES

PART 1 GENERAL

1.01 DEFINITIONS

- A. Reference Section 01650, Facility Startup.
- B. Person-Day: One person for 8 hours within regular Contractor working hours.

1.02 SUBMITTALS

- A. Training Schedule: Submit not less than 21 days prior to start of equipment installation and revise as necessary for acceptance.
- B. Preliminary Training Plan: Submit within 90 days after Notice to Proceed.
- C. Final Training Plan: Submit after training coordination meeting.
- D. Training Materials:
 - 1. Submit written outlines of proposed training sessions not less than 21 days prior to scheduled training.
 - 2. Furnish complete training materials, to include operation and maintenance data as required in this Section.
- E. Quality Control Submittals: When specified in the individual Specifications, submit:
 - 1. Qualifications of Manufacturer's Representative performing specified services.
 - 2. Manufacturer's Certificate of Proper Installation (COPI).

1.03 QUALIFICATION OF MANUFACTURER'S REPRESENTATIVE

- A. Authorized representative of the manufacturer, factory trained, and experienced in the technical applications, installation, operation, and maintenance of respective equipment, subsystem, or system. Additional qualifications may be specified elsewhere.
- B. Representative subject to acceptance by Engineer. No substitute representatives will be allowed unless prior written approval by Engineer has been given.

1.04 FULFILLMENT OF SPECIFIED MINIMUM SERVICES

- A. Where manufacturer's services are specified, furnish manufacturer's qualified representative. Where time is necessary in excess of that stated in the Specifications for manufacturer's services, additional time required to perform the specified services shall be considered incidental work.
- B. Schedule manufacturer's services to avoid conflicting with other onsite testing or other manufacturer's onsite services.

1. Determine that all conditions necessary to allow successful testing have been met before scheduling services.
- C. Only those days of service approved by Engineer will be credited to fulfill the specified minimum services.
- D. If specified, manufacturer's onsite services shall include as a minimum:
1. Assistance during product (system, subsystem, or component) installation to include observation, guidance, instruction of Contractor's assembly, erection, installation or application procedures.
 2. Inspection, checking, and adjustment as required for product (system, subsystem, or component) to function as warranted by manufacturer and necessary to furnish written approval of installation.
 3. Revisiting the site as required to correct problems and until installation and operation are acceptable to Engineer.
 4. Resolution of assembly or installation problems attributable to, or associated with, respective manufacturer's products and systems. Assistance during functional and performance testing and startup demonstration, and until product acceptance by the Owner.
 6. Training of Owner's personnel in the operation and maintenance of respective product as required by the Owner.
 7. Completion of Manufacturer's Certificate of Proper Installation with applicable certificates for proper installation and initial, interim, and final test or service.
 8. Additional requirements may be specified elsewhere.

1.05 TRAINING SCHEDULE

- A. List specified equipment and systems with respective manufacturers that require training services of manufacturer's representatives and show:
1. Estimated dates for installation completion.
 2. Estimated training dates to allow for multiple sessions when several shifts are involved.
- B. Adjust training schedule to ensure training of appropriate personnel as deemed necessary by Owner, and to allow full participation by manufacturer's representatives. Adjust schedule for interruptions in operability of equipment.
- C. Coordinate with Section 01310, Construction Schedules and Section 01650, Facility Startup.

1.06 TRAINING PLAN

- A. Preliminary Training Plan: If specified, and within 90 days after Notice of Award, submit for each proposed course:
1. Title and objectives.
 2. Training schedule.
 3. Prerequisite training and experience of attendees.
 4. Recommended types of attendees (e.g., managers, engineers, operators, maintenance).
 5. Course description and outline of course content.
 6. Duration.

7. Location (e.g., training center or site).
 8. Format (e.g., lecture, self-study, demonstration, hands-on).
 9. Instruction materials and equipment requirements.
- B. Final Training Plan: Submit the following after training coordination meeting, if specified.
1. Updated versions of course descriptions from preliminary training plan.
 2. Who will attend each course.
 3. Schedule of training courses including dates, duration, and locations of each class.
 4. Detailed course schedule for each day showing time allocated to each topic.
 5. Resumes of instructors providing the training.

1.07 TRAINING OWNER'S PERSONNEL

- A. Furnish trained, articulate personnel to coordinate and expedite training, to be present during training coordination meetings with Owner, and familiar with operation and maintenance manual information.
- B. Furnish manufacturer's representatives for detailed classroom and hands-on training to Owner's personnel on operation and maintenance of specified product (system, subsystem, component) and as may be required in applicable Specifications.
1. Manufacturer's Representative: Familiar with plant operation and maintenance requirements as well as with specified equipment.
- C. Pre-startup Training:
1. Coordinate training sessions with Owner's operating personnel and manufacturer's representatives, and with submission of preliminary operation and maintenance manuals.
 2. Complete at least 14 days prior to actual startup.
- D. Post-Startup Training: If required in Specifications, furnish and coordinate training of Owner's operating personnel by respective manufacturer's representatives.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01501

WEATHER PROTECTION STANDARD

PART 1 GENERAL

1.01 DESCRIPTION

- A. It is the intent of these standards to require the General Contractor to provide temporary enclosures and heat to permit construction work to be carried on during the months of November through March in compliance with Chapter 149, Section 44F of the Massachusetts General Laws. These standards are not to be construed as requiring enclosures or heat for operations that are economically infeasible to protect in the judgment of the Engineer. Included in this category, without limitations, are such items as Site Work, Excavation, Pile Driving, Steel Erection, Erection of Certain Exterior Wall Panels, Roofing, and similar operations.

1.02 WEATHER PROTECTION

- A. "Weather Protection" shall mean the temporary protection of that work adversely affected by moisture, wind and cold by covering, enclosing and/or heating. This protection shall provide adequate working areas during the months of November through March as determined by Engineer and consistent with the approved construction schedule to permit the continuous progress of all work necessary to maintain an orderly and efficient sequence of construction operations. General Contractor shall furnish and install all "weather protection" material and be responsible for all costs, including heating required to maintain a minimum temperature of 40 degrees (F) at the working surface. This provision does not supersede any specific requirements for methods of construction and/or curing of materials.
- B. General Contractor may, with the approval of Engineer, elect to utilize the permanent heating systems for temporary heat after the building is enclosed and after it has been tested and is ready to operate. However, it shall be his responsibility to have all portions of the permanent heating system that are used for heating during construction thoroughly cleaned and restored to first-class condition, to the satisfaction of the Engineer.
- C. Installation of weather protection and heating devices shall comply with all safety regulations including provisions for adequate ventilation and fire protection devices.
- D. The General Contractor shall furnish and install Fahrenheit thermometers at places designated by Engineer in order to determine if specified temperatures are being maintained.
- E. Within 30 calendar days after award of contract, General Contractor shall submit in writing to Engineer for approval, three (3) copies of his proposed methods for "Weather Protection".

END OF SECTION

SECTION 01505

MOBILIZATION

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Includes: The transportation and storage of all equipment and materials necessary to the Work and the field offices.
- B. RELATED WORK
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 thru Division 16 of these Specifications.

PART 2 MATERIALS (Not Applicable)

PART 3 EXECUTION

3.01 STORAGE AREA

- A. It shall be the Contractor's sole responsibility to procure and maintain a suitable storage area for tools, materials, and equipment necessary to perform the work that is acceptable to the Owner and the Engineer.
 - 1. The storage area obtained by the Contractor shall not obstruct or interfere with pedestrian or vehicular movement, and shall not occupy any space within the public right-of-way, except with specific permission from the Owner.
 - 2. The storage area shall be kept neat at all times.
 - 3. The Owner shall not be a party to negotiations related to acquisition of areas for storage or cleanup of the same (unless the storage area is on Owner's property), but reserves the right to inspect such area(s) for compliance with Owner regulatory requirements.
 - 4. Contractor shall not use storage area for bulk storage of hazardous materials (e.g., gasoline, solvents, oil).

3.02 FIELD OFFICE

- A. Contractors Field Office: Maintain a temporary field office near the Work for use during the period of construction at which readily accessible copies of all Contract Documents and approved shop drawings shall be kept.
 - 1. The office shall be located where it will not interfere with the progress of the work.

3.03 EQUIPMENT

- A. Contractor shall transport all equipment to the site, assemble the equipment as needed to proceed with the work and maintain the equipment as needed during the work.

END OF SECTION

SECTION 01510

TEMPORARY FACILITIES

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work of this Section shall consist of providing the following temporary facilities:
 - 1. Water,
 - 2. Sanitary Facilities,
 - 3. Electrical Service,
 - 4. Temporary Distribution System High Service Area Storage,
 - 5. Engineer's Field Office,
 - 6. Internet Services,
 - 7. Drainage.

PART 2 PRODUCTS

2.01 TEMPORARY WATER

- A. Drinking water shall be provided by the Contractor for his personnel and the personnel of his sub-contractors.
 - 1. Drinking water shall be tested and approved by the State Agency as "safe drinking water suitable for human consumption."
 - 2. Contractor shall furnish water for construction.

2.02 TEMPORARY SANITARY FACILITIES

- A. Sanitary conveniences, properly screened from public observation, for the use of all persons employed on the work and beginning with the first person engaged in preliminary operations, shall be provided and maintained by the Contractor in sufficient numbers through the completion of the work.
 - 1. Contractor shall be diligent in maintaining sanitary facilities; pumping weekly, or more often as required to protect soil and water quality.

2.03 ELECTRICAL SERVICES (PROVIDED BY ELECTRICAL CONTRACTOR)

- A. Provide the necessary temporary electrical service connections as required by the local electrical power provider and in accordance with Section 16050, Basic Electrical.
 - 1. Temporary distribution wiring and boxes as needed by the construction trades working on the site(s).
 - 2. Temporary service to field offices.

2.04 ENGINEERS FIELD OFFICE

- A. Within ten (10) days after receiving the Notice To Proceed, the Contractor shall furnish, install and equip a field office for the exclusive use of the Engineer. The location of the field office shall be approved by the Engineer. The Contractor shall maintain the field office until completion of the Work, including all equipment furnished with the field office.

- B. The field office shall be weathertight, shall have structurally sound foundations and superstructures, and shall resist temperature transmission. Floors shall be raised, shall withstand 125 psf live loads, shall be covered with resilient flooring, and shall not be smaller than 150 square feet. Field office shall be a private office; field office may be an area within Contractor's field trailer if it is partitioned off from the Contractor's space, includes a lockable door, an entrance lockset furnished with two keys, a screened window area equal to not less than ten percent of the floor area, and venetian blinds on all windows.
- C. The Contractor shall pay all costs for electricity, heat, telephone service, and maintenance of the field office. Telephone service costs to be paid by the Contractor shall include the cost of all local telephone calls.
 - 1. Maintenance of the field office shall include weekly cleaning in addition to any other maintenance items, and disposing of trash.
- D. Lighting shall uniformly deliver not less than 100 footcandles at desk height in all areas.
 - 1. Exterior lighting shall be located over the entrance door. Grounded duplex electrical receptacles shall be located around interior walls at approximately ten (10) foot spacing.
- E. Automatic heating equipment shall be capable of maintaining office temperature at 70 degrees F and automatic cooling equipment shall be capable of maintaining office temperature at 78 degrees F.
- F. Furnishings and equipment shall be as follows:

QUANTITY	DESCRIPTION
One	Sloping top drafting table with stool and drafting lamp,
Two	Folding chairs,
One	Armchairs with casters and swivel seats,
One	Pedestal desk, about 3' by 5', with lock and key,
One	Reference table, about 2 ½' by 5',
One	Four drawer vertical file cabinet, letter size with lock and key,
One	Plan rack with hanging sticks,
One	CO2 fire extinguishers; four lb. Capacity,
One	Plain bond desktop copier. Copier to be serviced, maintained, and supplied with paper by the Contractor,
One	Telephone,
One	Wastebasket.

2.05 INTERNET SERVICES

- A. The Contractor shall furnish temporary internet service connections to field offices.

2.06 TEMPORARY DRAINAGE

- A. Temporary drainage, as necessary shall be provided by the Contractor to keep the working area dry.

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01545

PROTECTION OF PROPERTY

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: The Contractor shall provide all necessary protection of existing property to prevent any damage to property adjacent to the construction.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in all divisions of these Specifications.

PART 2 MATERIALS (Not Applicable)

PART 3 EXECUTION

3.01 PROTECTION OF PROPERTY

- A. The Contractor shall, at his own expense, preserve and protect from injury all property either public or private along and adjacent to the line of work, and be responsible for and repair any and all damage and injury thereto, arising out of or in consequence of any act or omission of the Contractor.
 - 1. All existing pipes, culverts, poles, wires, fences, mailboxes, stone walls, curbs, bounds, etc., shall be temporarily removed, supported in place or otherwise protected from injury, and shall be restored to at least as good condition as that in which they were found immediately prior to the start of work.
 - 2. Lawns, shrubs, bushes, planting beds and decorative trees disturbed or damaged shall be restored to a condition equal to that found prior to the start of construction, either by temporary transplant or replacement in kind, except as otherwise indicated on the Drawings.
 - 3. Property which has been damaged and replaced shall be equal in quality and workmanship to the damaged property and shall be subject to the approval of the property owner.
 - 4. Branches which interfere with construction may be removed, only upon approval of the Owner.
 - a. Limbs and branches shall be trimmed off neatly and cleanly, close to the trunk of the tree or to its main branch. The cut surfaces shall be coated with an approved tree wound coating.

END OF SECTION

SECTION 01567

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work covered by this section of the specifications consists of furnishing all labor, materials, equipment and services, and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.
- B. The requirements set forth in this section of the specifications apply where indicated on the Contract Drawings and to any areas adjacent to wetlands, unless otherwise specifically stated.
- C. All work under this Contract shall be in accordance with the conditions stated herein and in the General Conditions. The Temporary Emergency Certificate issued by the Mansfield Conservation Commission applies to this Contract, and all conditions and requirements shall be met by the Contractor.
- D. All erosion control devices shall be constructed or installed prior to beginning any form of excavation, grading, placement of materials, or general construction.

PART 2 PRODUCTS

2.01 SPILL CONTAINMENT KIT

- A. Contractor shall maintain a spill containment kit on site throughout the duration of construction. Spill containment kit shall be sized to contain a volume greater than the largest fuel tank on site.

2.02 EROSION CONTROL (MULCH) SOCKS

- A. Mulch socks shall be constructed with a mesh tube filled with biodegradable material, with a tube diameter of 8-inches, as manufactured by Filtrexx Sustainable Technologies or approved equal. The sock shall be installed as indicated in the Contract Documents.

PART 3 EXECUTION

3.01 NOTIFICATION

- A. The Owner will notify the Contractor in writing of any non-compliance with the foregoing provisions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Owner may order stoppage of all or part of the work until satisfactorily

corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time lost due to any stop orders shall be made unless it was later determined that the Contractor was in compliance.

3.02 AREAS OF CONSTRUCTION ACTIVITY

- A. Insofar as possible, the Contractor shall confine his construction activities to those areas defined by the plans and specifications. All land resources within the project boundaries under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work under this contract.

3.03 PROTECTION OF WATER RESOURCES

- A. The Contractor shall not pollute streams, wetlands, or ponds with fuels, oils, bitumens, calcium chloride, acids or harmful materials. It is the Contractor's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers, wetlands and streams.
- B. Special measures should be taken to insure against spillage of any pollutants into public waters.
- C. Where material or debris has washed or flowed into or has been placed in existing watercourses, ditches, drains, pipes or structures, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the work, and the ditches, channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.

3.04 LOCATION OF STORAGE AREAS

- A. The location of the Contractor's storage areas for equipment and/or materials shall be upon cleared portions of the job site or areas to be cleared, as approved by the Conservation Commission, Owner, and/or the Engineer prior to commencement of construction activities. Plans showing storage facilities for equipment and materials shall be submitted for approval of the Owner.
- B. Adequate measures for erosion and sediment control, such as the placement of baled hay or straw around the downstream perimeter of stockpiles, shall be employed to protect any downstream areas from siltation.
- C. The Owner may designate a particular area or areas where the Contractor may store materials used in his operations.

3.05 DISCHARGE OF DEWATERING OPERATIONS

- A. Any water that is pumped and discharged from an excavation as part of the Contractor's water handling shall be filtered by an approved method prior to its discharge into a receiving water or drainage system.
- B. The pumped water shall be filtered through baled hay or straw, a vegetative filter strip or a vegetated channel to trap sediment occurring as a result of the construction operations. The

vegetated channel shall be constructed such that the discharge flow rate shall not exceed a velocity of more than 1 foot per second. The sediment shall be cleared from the channel periodically.

3.06 PROTECTION OF AIR RESOURCES

- A. During the progress of work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of water as necessary, so as to minimize the creation and dispersion of dust.
 - 1. If the Engineer decides that it is necessary to use calcium chloride for more effective dust control, then the Contractor shall furnish and apply the material as directed.
 - 2. Calcium chloride shall be commercial grade, furnished in 100-pound, 5-ply bags, stored under weatherproof cover and stacked alternately for ventilation.
 - 3. Application for dust control shall be at the rate of about 1/2 pound per square yard per application.
- B. Burning of rubbish and waste material on the site shall not be permitted.

3.07 SEPARATION AND REPLACEMENT OF TOPSOIL

- A. Topsoil shall be carefully removed and separately stored to be used again as directed. The topsoil shall be stored in an area acceptable to the Owner and adequate measures shall be employed to prevent erosion of said material.

3.08 EROSION CONTROL SOCKS

- A. To trap sediment and to prevent sediment from entering bordering wetlands, erosion control socks shall be used where indicated on the drawings or as directed by the Owner. Care shall be taken to keep them from breaking apart. The socks should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically.
- B. Socks shall be maintained or replaced until they are no longer necessary for the program intended or are ordered removed by the Owner.

3.09 INSPECTION OF CONSTRUCTION PERIOD BEST MANAGEMENT PRACTICES (BMPs)

- A. Construction Period BMPs shall be inspected and maintained routinely throughout the duration of the project and after every storm event producing a 1/2-inch of precipitation or more.

END OF SECTION